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PRECISION AND ACCURACY ASSESSMENTS FOR STATE AND LOCAL AIR MONITORING NETWORKS 1987

by

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Precision and accuracy data obtained from state and local agencies during 1987 are analyzed. Pooled site variances and average biases which are relevant quantities to both precision and accuracy determinations are statistically compared within and between states to assess the overall effectiveness and consistency in the application of various quality assurance programs. Individual site results are evaluated for consistent performance throughout the year. Reporting organizations, states and regions which demonstrate consistent precision and accuracy data as the result of effectively administered quality assurance programs are identified. This information is intended as a guide for identifying problem areas, for taking corrective action from the standpoint of improving the effectiveness of quality assurance programs, and for providing more knowledgeable decisions concerning attainment status with regards to ambient air quality standards. An approach to deal with accuracy data for individual sites is presented, and an alternative sampling design for generating precision and accuracy data is discussed.

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FOREWARD

Measurement and monitoring research efforts are designed to anticipate potential environmental problems, to support regulatory actions by developing an in-depth understanding of the nature and processes that impact health and the ecology, to provide innovative means of monitoring compliance with regulators, and to evaluate the effectiveness of health and environmental protection efforts through the monitoring of long term trends. The Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina, has the responsibility for assessment of environmental monitoring technology and systems; implementation of agency-wide quality assurance programs for air pollution measurement systems; and supplying technical support to other groups in the Agency including the Office of Air and Radiation, the Office of Toxic Substances, and the Office of Enforcement.

Ambient air quality data collected by the states and local agencies are used in planning the Nation's air pollution control strategy, in determining if National Ambient Air Quality Standards are being achieved, and in determining long term trends of air quality. Prior to the regulations of May 10, 1979, the procedures used in site selection, controlling equipment, and calculating and validating data varied considerably among agencies. These regulations serve to improve and make more uniform the quality assurance programs of the states and local agencies and to require the reporting of data quality estimates for precision and accuracy beginning for the calendar year 1981. Revisions to regulations promulgated March 19, 1986, required reporting of individual site data beginning January 1987. Previous reports summarized the data on a yearly basis from 1981 to 1986. This report presents an analysis of the results for 1987 to assess the overall effectiveness of various quality control programs administered by the states and local agencies.

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ABSTRACT

Precision and accuracy data obtained from state and local agencies during 1987 are analyzed. Pooled site variances and average biases which are relevant quantities to both precision and accuracy determinations (1) are statistically compared within and between states to assess the overall effectiveness and consistency in the application of various quality assurance programs. Individual site results are evaluated for consistent performance throughout the year. Reporting organizations, states and regions which demonstrate consistent precision and accuracy data as the result of effectively administered quality assurance programs are identified. This information is intended as a guide for identifying problem areas, for taking corrective action from the standpoint of improving the effectiveness of quality assurance programs, and for providing more knowledgeable decisions concerning attainment status with regards to ambient air quality standards. An approach to dealing with accuracy data for individual sites is presented, and an alternative sampling design for generating precision and accuracy data is discussed.

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SECTION 1

INTRODUCTION

In accordance with revisions to Appendix A, 40 CFR Part 58 promulgated March 19, 1986, site-specific precision and accuracy data were submitted as actual test results for the first full year beginning January 1987. The availability of individual site data and the opportunity to assess the performance of specific instruments was cited as a way to improve the usefulness of the data quality estimates associated with the NAMS/SLAMS monitoring network (1). The regulations did not, however, specify how this would be accomplished except that EPA would now be responsible for calculating the pooled precision and accuracy probability limits formerly calculated and reported by the reporting organizations. The objectives of this report are to analyze and interpret individual site data as they pertain to:

1. Indentifying extreme measurement errors.

2. Evaluating the effectiveness of SLAMS quality assurance programs.

3. Validating models used to describe precision and accuracy data.

4. Improving decisions concerning attainment of air quality standards as they relate to specific instruments.

The goal is to provide an overall assessment of various quality assurance programs at the reporting organization, state, and regional levels. Routine calculations are provided only to verify assumptions required to satisfy the objectives. Otherwise, routine information is available through various programs (2) that have access to PARS data files.

Manual SO_2 and NO_2 data were not included in this report because so little data is available. Also, since site codes for 1987 were converted to FIPS codes for this report, site-to-site comparisons between the PARS data and the National Performance Audit Program data were not possible since a complete cross reference conversion file was not available.

SECTION 2

NATIONAL RESULTS

REPORTING OF INDIVIDUAL SITE QUALITY CONTROL DATA

Precision and accuracy data for 1987 were stored in the Precision and Accuracy Reporting System (PARS) data files as individual site-date pairs of indicated (measured) concentrations (or flow rates in the case of TSP or PM-10) and designated (known, actual, primary) concentrations (or flow rates). Before calculating pooled precision and accuracy probability limits, data records were flagged for coding inconsistencies (e.g., matching date and quarters, proper method codes and corresponding units codes, matching state and region codes, etc.). In addition, data pairs used in this report were screened for conformance to ranges and limits specified in 40 CFR Part 58 (1) for designated audit concentrations (indicated flow rates). Data pairs which were not in conformance (allowing for rounding) and in which at least one of the values of a pair was missing or at the minimum detectable limit for the instrument were not used in probability limit calculations or data analyses.

Of 83,013 pairs of eligible precision checks, 3,008 were outside guideline limits. The majority (2,094) of these pairs were ambient lead concentrations below the allowable limit of 0.15 $\mu g/m^3$. This constituted approximately two-thirds of the 3,378 lead pairs of precision checks. Out of the remaining 914 pairs of precision checks outside guideline limits, 901 were particulate (TSP and PM-10) concentrations below the allowable limit of 20 $\mu g/m^3$. The remaining 13 pairs were CO concentrations for which the designated audit concentration was outside the specified range of 8-10 ppm.

Accuracy data pairs totalled 18,125 of which 781 were outside specified ranges for audit levels. These nonconformance pairs were distributed solely among the gases: CO (240), NO_2 (98), O_3 (146), and SO_2 (297). All analytical lead audit concentrations and indicated flow rates for manual instruments were within specified ranges. The distibution of data pairs used for calculating precision and accuracy probability limits are shown in Figures 1 and 2. Being outside specified limits does not necessarily constitute an extreme value, however, it should be noted that in the case of ambient lead, national probability limits were cut in half by eliminating collocated pairs with measurements below 0.15 $\mu g/m^3$.

SCALES, MODELS, AND EXTREME VALUES

Precision and accuracy data are characterized in terms of the upper and lower 95% probability limits (assuming a normal distribution) of the quantity

FIGURE 1. DISTRIBUTION OF INDIVIDUAL PRECISION CHECKS FOR 1987

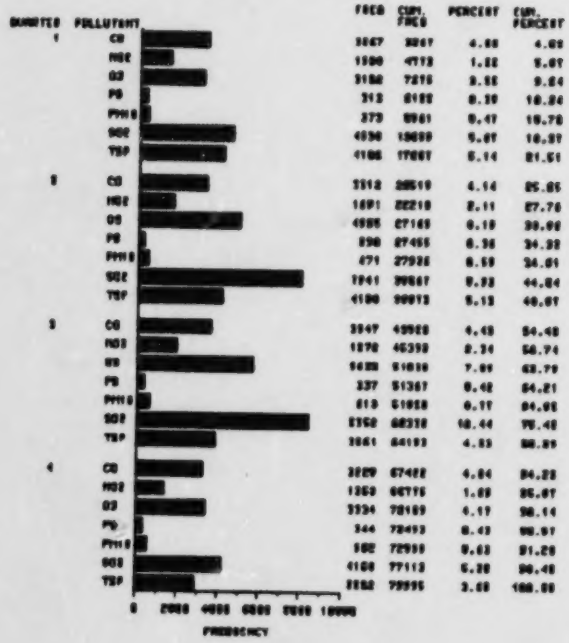
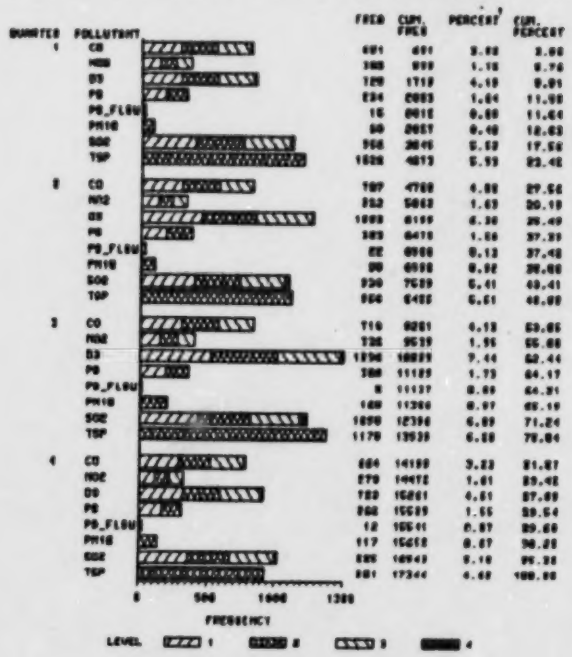


FIGURE 2. DISTRIBUTION OF INDIVIDUAL ACCURACY AUDITS FOR 1987



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quantity "percent difference" as defined in 40 CFR Part 58, Appendix A. There are two formulas for calculating the percent difference depending on whether the data are precision checks or accuracy audits and whether the instruments are automated or manual.

The difference between precision data pairs from collocated manual instruments (TSP, PM-10, and Pb) are expressed as a percentage of their average using the formula:

$$D_m\ (\%) = 2(Y-X)/(Y+X) \cdot 100$$

where Y is the indicated value and X is the designated value. For precision data pairs and accuracy data pairs from automated instruments and flow rate audits from manual instruments, the formula for percent difference is:

$$D_a\ (\%) = (Y-X)/X \cdot 100$$

where the difference between the indicated value (Y) and the designated value (X) is expressed as a percentage of X.

The percent difference is a dimensionless quantity that Cox (3) classifies as an "index of response," i.e., a combination of two values that is treated as a new observation for analysis as a single quantity. As a single quantity, there are some inherent characteristics concerning the scale of the percent difference that should be considered. For example, the quantity D_m can vary between the limits of ±200% since theoretically both Y and X can range from zero to plus infinity. The quantity D_a can vary between -100% and plus infinity where X is usually controlled to be within specified limits of a nominal audit level.

Every statistical procedure is based on an underlying model composed of formulas along with certain assumptions and distributional properties that must be satisfied for the model to be valid. The decision to use the percent difference to calculate probability limits assumes a special form of the relationship between Y and X. An alternative model such as the regression of Y onto X provides a more objective way of deriving the best suitable relationship from the data (3). The use of the percent difference as a way to calculate regression slopes is considered in the section on data analysis as one possible way of characterizing accuracy data for individual site pairs generated by automated analyzers.

The formulas for percent difference provide a direct method for examining individual data pairs for gross errors resulting from encoding mistakes. A value that has been encoded improperly by slipping the decimal place but which otherwise differs in magnitude from the other value of the pair by no more than a ± 10% error can be identified as being extreme by being outside the limits of ± 160% for D_m or (-89%, 800%) for D_a. This is a valuable empirical check without regard to distributional properties that can be easily programmed for identifying gross errors in the data.

The influence of possible outliers in statistical calculations must also be considered when the assumption of a normal distribution is added. From a purely mathematical perspective, the distribution of percent differences using the formula, D_a, is apparently skewed with an expected mean value of zero. However, for the purpose of calculating probability limits, the percent differences are considered to be normally distributed. Under these conditions, a percent difference larger in magnitude than 160% for precision data (and manual sampler flow rate audits) and 80% for accuracy data were removed as statistical outliers. These limits are four times larger than those recommended by guidelines (4) as target limits for precision and accuracy data. This outlier test is based on a confidently assumed model that is mostly intuitive with no regard to alternative hypotheses. However, the test is of sufficient width (8σ limits) to be very conservative at the risk of allowing "bad" values to remain in the data set. Even though Shewhart (5) recommends the use of 3σ limits, this obviously pertains to ideal process control data and may be too tight for the purposes of identifying outliers in environmental precision and accuracy data. Both gross errors and statistical outliers are listed in Tables A-1 and A-2 for further considerations as they may relate to problem areas or to attainment decisions concerning short term standards. It is impossible to determine at this point if the number of extreme values is characteristic of precision and accuracy data since this is the first time that individual SLAMS site quality control data has been examined collectively and consequently the first attempt at dealing with outliers in the data.

Frequency histograms of all percent differences (minus extreme values) are given in Tables B-1 and B-2 for precision and accuracy data, respectively. All individual site values are grouped together by pollutant (and level for accuracy data) to produce univariate statistics as a collective body of data. Other information such as box plots and normal probability plots are provided as part of routine SAS® output (6). Although no inference is drawn, these statistics should prove useful for appraising the uncertainty in individual precision and accuracy data.

SECTION 3

DATA ANALYSIS

ANALYSIS OF PRECISION AND ACCURACY DATA

The primary aim of this report is to assess the overall effectiveness of quality assurance programs administered by the states and local agencies. Accomplishing this within the scope of current guidelines for calculating precision and accuracy estimates requires verification of certain basic underlying assumptions either implied or explicitly stated in the models presented in Section 5 of the amendments to 40 CFR Part 58 (1). These models use weighted site averages and pooled within-site variances to calculate quarterly probability limits for percent differences of precision data from a given reporting organization. Accuracy calculations treat different instruments (analyzers) for a given quarter and reporting organization as having been drawn from a homogeneous group of instruments with similar statistical properties. The 95th percentiles used for the probability limits assume that the percent differences are normally distributed. The expansion of these calculations and assumptions to derive probability limits at the state, regional, national, and annual levels are discussed by Rhodes (7).

If it is assumed that the percent differences summarized in Tables B-1 and B-2 were taken from the same normal population for a given pollutant (and level), then annual probability limits could be calculated on a nationwide basis as shown in Tables 1 and 2. The pooled within-site standard deviations for precision data over all sites and quarters is equivalent to the root mean-square error obtained by applying an analysis-of-variance type linear model to each pollutant. Comparisons of site means within reporting organizations, within and between states and regions, and across quarters using F-tests require the same basic assumption: that all site variances are homogeneous. The limits given in Tables 1 and 2 would be valid in this case if assumptions of homogeneity of variance were correct and there were no significant analysis of variance F-tests. However, this is an extreme case and one that is highly unlikely to occur. There may, however, be some reporting organizations, states, or even regions whose sites have equal bias as compared to within-site differences. In dealing with quality control data, samples should be in subgroups that are as homogeneous as possible so that if differences are present, they show up as differences between subgroups rather than as differences between numbers within a group. "For it is when the variation between subgroups exceeds that which may be predicted on the basis of variation within subgroups that the process is declared to be out of control" (5). This latter assumption (samples should be in subgroups that are as homogeneous as possible) is the basic premise of this investigation to examine the effectiveness of various quality assurance programs.

Table 1. National Probability Limits for 1987 PARS Precision Data

Pollutant	N	Weighted average	Pooled std. dev.	Lower 95% prob. limit	Upper 95% prob. limit
CO	13347	0.0951311	3.56966	-6.9014	7.09166
NO_2	6410	-0.31607	5.15769	-10.425	9.793
O_3	17018	-0.71673	4.65979	-9.8499	8.41645
Pb	1247	-1.6334	10.8233	-22.847	19.5803
PM-10	1936	1.28434	6.85278	-12.147	14.7158
SO_2	24908	-0.8744	4.31585	-9.3335	7.58466
TSP	14909	0.0768653	5.26593	-10.244	10.3981

Table 2. National Probability Limits for 1987 PARS Accuracy Data

Pollutant	Level	N	Weighted average	Pooled std. dev.	Lower 95% prob. limit	Upper 95% prob. limit
CO	1	1004	0.140355	6.64749	-12.889	13.1694
	2	888	0.347702	3.40864	-6.333	7.0286
	3	877	-0.018521	3.17737	-6.246	6.2091
	4	6	0.004856	2.00937	-3.933	3.9432
NO_2	1	440	0.76071	9.53064	-17.919	19.4408
	2	387	0.09642	5.42593	-10.538	10.7312
	3	380	-0.21861	4.57558	-9.383	8.9455
O_3	1	1336	-0.8153	6.04374	-12.661	11.0304
	2	1238	-0.7356	4.96934	-10.475	9.0043
	3	1226	-0.7518	3.88204	-8.361	6.8570
	4	82	-2.3183	2.22912	-6.687	2.0507
Pb	1	600	-0.4267	5.29977	-10.814	9.96086
	2	575	-1.0383	3.79247	-8.472	6.39496
Pb flow	2	55	4.58997	4.85823	-4.9322	14.1121
PM-10	2	445	0.109533	4.74637	-9.1934	9.41242
SO_2	1	1353	-0.22262	5.65162	-11.300	10.8546
	2	1183	-0.24329	5.15411	-10.345	9.8588
	3	1188	-0.35348	4.82171	-9.804	9.0971
	4	105	1.39763	4.18703	-6.809	9.6042
TSP	2	3963	0.118268	3.3491	-6.446	6.6825

For precision data, biweekly samples for a quarter determine the basic subgroup. Variation within this subgroup is used to detect differences between sites, between quarters for a given site, or between groups of sites. With regards to the structure of higher level groupings, the basic experimental design for characterizing precision data could be considered as a completely nested design with respect to location parameters (i.e., sites within reporting organizations within states within regions) with repeated sampling (i.e., biweekly measurements) and quarters providing replication. Under the present model of 40 CFR Part 58, accuracy data does not provide a way of comparing individual sites. Rather, site differences within a reporting organization provide the within-subgroup variation to derive quarterly probability limits for each audit level. In the context of experimental design, accuracy data also follow a nested-like hierarchal structure with respect to location parameters, and quarters provide replication, but there is no repeat biweekly sampling. If analysis of variance techniques had been applicable to the PARS data, between-site variances pooled across reporting organizations and quarters would provide the experimental error for making within and between-state and region comparisons at each separate level.

The assessment of precision and accuracy data involves examining the variance of biweekly samples (between-site variance for accuracy data) and bias (weighted averages) as relevant quantities to both precision and accuracy probability limit calculations. Bias is a systematic error that can often be adjusted through the use of calibration procedures. The variance is a measure of precision (or rather imprecision) that is indicative of random uncontrolled errors that are more serious. Due to extreme imbalance in the data and the need to verify basic assumptions of homogeneity of variance, analysis of variance techniques were not used to compare biases between groups based on location and time of year.

The approach used to analyze the precision and accuracy data in this report began with the basic subgroup of sites (accuracy data) and biweekly samples (precision data) and worked up the hierarchal structure and across quarters. This provided an independent assessment of the validity of the assumptions of homogeneity of variance and equality of means as they apply to calculating probability limits for each group. The assumption of normality was accepted since all statistical tests used in this report rely to some extent on this assumption, and since it is difficult to verify this on the basis of 6 or 7 biweekly samples per site per quarter for precision data. For accuracy data, there was usually only one site per quarter available per reporting organization.

The basic statistical tools used in this analysis are Bartlett's chi-square test for homogeneity of variance and Welche's F-test for equality of means (8). Bartlett's test is well suited to precision data with unequal numbers of biweekly measurements from site to site and accuracy data with unequal numbers of sites across reporting organization. It is, however, sensitive to departures from normality as well as to unequal variances. Welche's F-test is equivalent to an analysis-of-variance F-test when within-subgroup variances are homogeneous, but it does not require that variances be homogeneous. The effectiveness of individual quality assurance programs should

not be judged only by the width of the probability limits for various groups, but also by the validity of assumptions used in calculating probability limits as determined by statistical tests. As a rule, both multiple comparison tests must not be rejected at the $\alpha = 0.01$ significance level to show justification for claiming a real difference between biases or between variances. This level was chosen as an extra measure of precaution to prevent erroneously rejecting comparisons as being significant due to the possible lack of normality in the data. Since Welche's F-test does not require that variances be homogeneous, the two tests are independent. A valid probability limit is an indication that the measurement system(s) is in control and producing uniform results with respect to the group of sites to which the probability limit applies. The width of the limits can be judged against the PARS goals (4) for 95% probability target limits of ± 15% (all precision checks and flow rate audits) and ± 20% (accuracy audits).

PRECISION RESULTS

The analysis of precision data was begun at the reporting organization level since according to Section 3 of 40 CFR Part 58, probability limits at this level are derived from pooled estimates of variances and weighted means of percent differences from stations (sites, instruments, etc.) that are expected to be reasonably homogeneous, as a result of common factors (1). Table C-1A in Appendix C lists reporting organizations for each pollutant that were determined to have homogeneous within-site variances and equal means across sites for each quarter.

Weighted averages, pooled standard deviations, and 95% probability limits are given in Table C-1A in addition to Students t-test results for paired data to determine if the weighted average has a significant bias from zero (denoted by *) at the $\alpha = 0.05$ significance level. This significance level was used since t-tests are more robust to departures from normality. The difference between the degrees of freedom (D.F.) for the t-test and N, the total number of eligible pairs, is equal to the number of sites. The reporting organizations listed demonstrate a desirable degree of effectiveness in the consistent administration of a quality assurance program on a quarterly basis. Approximately half of the reporting organization-quarter probability limits that made the list were within target limits. Table C-1B lists those reporting organizations that demonstrated effectiveness in administering a quality control program across the entire year.

States with homogeneous variances and equal biases across reporting organizations were also determined for each quarter (Table C-2A). A minimum requirement to make this list was to have more than one reporting organization in a given quarter in Table C-1A. Table C-2B lists those states that demonstrated a high degree of effectiveness in administering a quality assurance program across reporting organizations for the year. States with only one reporting organization should refer to Table C-1A.

As shown in Table 1, probability limits for precision data do not appear valid on a nationwide scale under the assumptions of homogeneity of variance and equal means. However, probability limits at this level apply to the

examination of trends of ambient air quality data where acceptable probability limits for reporting organizations may be as wide as ± 100% (9), and homogeneity of variance is not of primary consideration. Use of the PARS data for purposes other than trends assessment may require that data be examined in smaller groups especially when the validity of assumptions concerning the uniformity of data is important.

Although the requirements for precision and accuracy data were not established for the specific purposes of setting standards or determining attainment status, the extent to which an ambient concentration is nonattainment due to measurement error cannot be ignored. When attention is focused on individual site data, more emphasis is placed on the attainment of short-term standards relative to the performance or adequacy of specific methods or types of monitoring instruments. Although precision (and accuracy) data may not be directly applicable to the determination of attainment status to long-term standards due to averaging times and spatial differences, the overriding requirements are in conjunction with the interpretation of air quality data (9). In this regard, site-specific bias and imprecision (variance) provide basic information upon which to draw inference or to simply calculate probability limits.

Annual probability limits for 1987 CO precision data are shown in Table C-3 as an example of individual sites that show a consistent behavior across the entire year. These sites were maintained with such control that biweekly measurements across the entire year may be considered drawn from a single homogeneous population. Data of this nature are indispensable in making more informed attainment decisions. Even in situations were exact dates of precision and accuracy data and questionable air quality measurements do not coincide, having a set of precision and accuracy data that is representative of a larger population of dates than those actually sampled may help to infer the extent to which measurement error influences an attainment decision.

ACCURACY RESULTS

The basic calculations for computing probability limits for accuracy data are the arithmetic mean and between-site standard deviation for each reporting organization at each audit level on a quarterly basis. Minimum requirements for these calculations are given in 40 CFR Part 58. Pooling of variances across quarters is not required. However, in the interest of assessing the overall effectiveness of various quality assurance programs, it was necessary to expand the basic calculations to cover annual results and to make comparisons within and between states. In these cases, the homogeneity of between-site variances and equal quarterly averages within reporting organizations had to hold for the probability limits to be statistically valid. Table D-1A lists reporting organizations that demonstrated a consistent and effective quality assurance program across the entire year for a particular audit level. Continuing up the hierarchy tree on a level-by-level basis, Tables D-2A and D-3A list states and regions, respectively, that demonstrated consistent quality control for all reporting organizations on a yearly basis.

As with precision data, satisfying the assumptions of homogeneous variance and equal means is not necessary to the study of trends so Table 2 may be adequate for this purpose. The validity of these assumptions is necessary for assessing the effectiveness of quality assurance programs. However, a program that is effective at one audit level and not at another is not completely effective.

Under the condition of homogeneity of variance, the average of the percent difference across levels can be considered an estimate of the bias of the slope of a linear regression line through the origin as compared to an ideal slope of 1.00 (10). This model would apply to data with two or more levels such as gases and analytical lead results. The basic statistical assumption of homogeneity of variance required for the validity of using this model on accuracy data can be tested using Bartlett's chi-square statistic. Table D-1B lists probability limits and slope estimates along with tests of significance of bias in the slope for reporting organizations that demonstrated an effective quality control program with respect to homogeneity of variance across levels when Bartlett's statistic was used. Tables D-2B and D-3B provide the same information for states and Regions, respectively.

ANALYSIS OF INDIVIDUAL SITE DATA

Using the models customarily employed for precision and accuracy data, there is currently no provision for calculating probability limits for accuracy data at individual sites. However, if the conditions of homogeneity of variance can be assumed to hold across levels, then the average and variance of D_a (across levels) provide estimates for calculating probability limits for an individual site. In this case, the average is an estimate of the bias in the slope of a regression line through the origin as compared to an ideal slope of 1.00. For calculating variance, there are only one, two, or three degrees of freedom at most depending on the number of levels audited. An alternative model that would be a more objective way of estimating the slope and consequently the bias is to regress Y onto X. These possibilities will be discussed later in the report. The conclusions concerning the effectiveness of a quality assurance program do not apply to the analysis of individual site data since no tests were conducted concerning the homogeneity of the values used in the calculations. The probability limits for bias and slope estimates for CO accuracy data are presented in Table D-4 as a viable approach to dealing with individual site accuracy data. Only those sites audited for more than one quarter with a total of six or more percent differences and at least two audit levels were considered. Until more research can be conducted in this area, the risk must be accepted that substantial departures from the necessary assumptions will invalidate the estimates derived from this latter approach.

METHOD RESULTS

As a final consideration in examining precision and accuracy data for 1987, probability limits are provided in Tables E-1 and E-2 on a national basis for individual methods. These estimates are given without statistical interpretation since the data were gathered without the intention of comparing

methods; to do so would require such stringent assumptions that the conclusions would be at least misleading, if not invalid. Within-site variances for precision data were pooled across all sites with a common method regardless of location or time of year, or whether or not the variances were homogeneous. Even without benefit of valid formal inference procedures, there are indications that at low audit levels there is more variability and, consequently, wider probability limits regardless of the method used.

SECTION 4

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Due to the number of accuracy audit levels outside specified federal guidelines (1), more care should be taken in certifying that gas cylinders used for audit purposes are within prescribed limits. Although the number of gross errors due to encoding was surprisingly low considering the total number of precision and accuracy pairs, there should be some mechanism, preferably in the front-end PARS data entry system (2), to screen for invalid audit levels and encoding errors so that the necessary corrective action can be taken prior to submitting data.

The availability of individual site data is invaluable in providing more detailed information concerning the performance of site-specific methods and in providing more informed attainment decisions pertaining to a specific site. In addition, having individual site data affords an opportunity to use statistical models to assess the overall effectiveness of specific quality assurance programs. Evaluations based solely on probability limits are inadequate for these purposes. It is evident that some statistical measure of internal comparability must be used in order to detect uniformly reliable precision and accuracy data. This is important for identifying states or reporting organizations that may have difficulty in consistently administering an effective quality assurance program.

The results presented in this report are by no means conclusive. The reporting organizations, states and regions listed as demonstrating consistently effective quality assurance programs were judged on the basis of the uniformity of results where there was no justification in claiming a real difference between biases or between the variances of the data. Precautions were taken to reduce risks of committing errors in this assessment. In fact, it was in the verification of basic assumptions required to validly calculate probability limits that results relating to the effectiveness of various quality assurance programs were derived. The outcome of some comparisons may be due to lack of normality in the data. Although normality is not a direct indicator of the effectiveness of a quality assurance program, it is important for statistically testing the homogeneity of variance and equality of biases as a way of assessing the uniformity of the data. It is hoped that this evaluation will provide Regional QA Coordinators with information to assist in their review of operations and quality control practices across the states in their region.

RECOMMENDATIONS

In the interest of providing precision and accuracy data that is more easily analyzed, interpreted, and costwise and timewise more economical, some consideration should be given to improving the efficiency of the PARS precision and accuracy sampling design. Recommendations are presented in this section that should prove beneficial in these regards to the PARS and similar data bases.

With the exception of flow rate audits, audits should be performed on all instruments at two nominal levels on a biweekly basis. In effect, there would be only one set of data rather than two: one for precision checks and one for accuracy audits. This would allow a regression approach to be used in analyzing and interpreting the data. To make use of the percent difference calculation, D_a, for automated analyzers, the basic requirements would be that the regression line between Y and X be a straight line through the origin, and that the error about the line be proportional to audit levels (i.e., homogeneous variance in percent difference across levels). In this case, levels could be placed near the extremes providing a minimum variance estimate of the slope using the percent difference calculation (3, 10). An optional third level could be audited at a midpoint once per quarter as a test for curvature if needed. However, the use of two levels is best if the estimate of a slope is of primary importance (3). Probability limits would still be used as an indicator of the distribution of the bias between the average of ratios, Y/X, and the ideal slope of 1.00. Precision estimates would be calculated from the variance of biweekly samples at each level.

Collocated data from manual instruments would still be gathered on a biweekly schedule. This is basically a regression situation as it exists since ambient levels are paired to calculate the percent difference. However, the formula currently used for D_m for manual methods is approximately equal to the quantity log Y - log X (11). Therefore, if a lognormal distribution is assumed for the distribution of ambient particulate data (which is a common assumption), the percent difference, D_m, is distributed as a normal variable around a mean of zero when there is no bias. Even in the case of D_a, averaging the ratios Y/X as an estimate of the slope of a regression line through zero is equivalent to taking logs of the indicated measurements, Y, in order to stabilize the variance across levels when using standard regression techniques (10). Using this approach, the terms "accuracy" and "precision" are quantities that refer to the bias and variance, respectively, of all quality assurance data and not to two separate sets of data. This is the usual statistical interpretation of these terms. Flow rate audits should no longer be classified as accuracy audits for the manual methods, but simply as a check on the quantity flow rate since accuracy (bias) and precision (variance) are both relevant quantities to flow rate audits.

The regression approach would provide a single model for assessing all precision and accuracy data on a site-specific basis. Currently, there is no model for examining accuracy data on a site-specific basis. As the sampling design now exists, sites are treated as random for calculating probability

limits. For precision data, biweekly measurements provide the random variation for calculating within-site variances, but at only one audit level. In quality control work, it is the behavior of the specific instruments (sites) at different concentration levels that is of interest and not the behavior of a random sample of instruments from some larger population of possible instruments. This is a weakenss in the SLAMS PARS system's design that should be resolved.

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APPENDIX A

EXTREME VALUES

TABLE A-1. EXTREME PERCENT DIFFERENCES FOR 1987 PARS PRECISION DATA

TABLE A-1. EXTREME PERCENT DIFFERENCES FOR 1987 PARS PRECISION DATA

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
2	RQ	1	721290004	N	54	7	1	3	7	4.970	9.800	97.183
6	LA	1	220330004	N	51	7	1	1	20	0.860	8.900	934.884
9	CA	1	60670001	N	8	7	3	9	24	9.651	16.200	67.858
9	CA	1	60670001	N	8	7	4	10	13	9.651	16.200	67.858
9	CA	1	60670001	N	8	7	4	10	18	9.651	16.600	72.003
9	CA	1	60990005	S	8	7	1	2	10	9.973	0.678	-93.202
9	CA	1	60990005	S	8	7	1	2	11	9.973	21.870	119.292
			60990005	S	8	7	1	2	23	9.973	21.887	119.463

POLLUTANT =NO2

REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
3	DE	1	100032002	N	25	7	1	2	6	0.940	0.100	-89.4
9	CA	1	60070002	S	35	7	4	11	24	0.097	0.038	-60.8
9	CA	1	60170009	S	35	7	2	4	14	0.090	0.020	-77.8
9	CA	1	60170009	S	35	7	2	6	29	0.086	9.999	11526.7
9	CA	1	60190005	N	35	7	1	3	1	0.096	0.020	-79.2
9	CA	1	60190005	N	35	7	1	3	22	0.096	0.018	-81.2
9	CA	1	60190005	N	35	7	1	3	29	0.096	0.010	-89.6
9	CA	1	60670001	N	35	7	4	11	11	0.090	0.025	-72.2
9	CA	1	60990005	S	35	7	1	2	10	0.098	0.005	-94.9
9	CA	1	60990005	S	35	7	1	2	11	0.098	0.379	286.7
9	CA	1	60990005	S	35	7	1	2	23	0.098	0.401	309.2
			60990005	S	35	7	1	3	2	0.098	0.002	-98.0

POLLUTANT =O3

REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
3	DE	1	100031003	N	4	7	1	2	26	0.082	0.009	-89.02
4	GA	10	132150008	N	56	7	4	10	15	0.010	0.098	880.00
9	AZ	200	40130019	S	19	7	3	8	11	0.900	0.088	-90.22
9	AZ	300	40191014	N	53	7	2	6	29	0.980	0.097	-90.10
9	CA	1	60251003	S	19	7	4	12	1	0.085	0.011	-87.06
9	CA	1	60450005	S	19	7	3	9	16	0.090	0.000	-100.00
9	CA	1	60792002	S	19	7	1	1	7	0.085	0.001	-98.82
9	CA	1	60990005	S	19	7	1	2	11	0.098	0.012	-87.76
9	CA	1	60990005	S	19	7	1	2	23	0.098	0.019	-80.61
9	CA	1	61110005	S	19	7	4	11	8	0.090	0.010	-88.89
			61110005	S	19	7	4	11	15	0.090	0.011	-87.78

TABLE A-1. EXTREME PERCENT DIFFERENCES FOR 1987 PARS PRECISION DATA

POLLUTANT =PB

REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
4	AL	11	11090003	S	803	1	4	10	18	0.570	0.160	-112.33
4	AL	12	10731006	S	803	1	1	3	16	0.470	1.130	82.50
4	AL	12	10731006	S	803	1	4	10	6	3.040	1.520	-66.67
4	AL	12	10731007	S	803	1	1	1	21	0.450	0.210	-72.73
4	AL	12	10731007	S	803	1	1	2	14	1.850	0.910	-68.12
4	AL	12	10731007	S	803	1	2	4	9	5.960	2.980	-66.67
4	FL	11	120310084	N	803	1	4	12	23	10.400	0.880	-168.79
4	FL	12	120571060	S	803	1	2	4	27	0.185	0.000	-200.00
4	FL	18	120250024	N	803	1	3	7	22	0.100	0.200	66.67
4	FL	18	120250024	N	803	1	1	2	26	0.100	0.200	66.67
4	FL	18	120250024	N	803	1	2	5	9	0.200	0.100	-66.67
4	FL	18	120250024	N	803	1	2	5	27	0.200	0.100	-66.67
4	TN	2	471570038	N	803	1	2	6	8	0.100	0.200	66.67
5	IL	3	170316004	S	803	1	2	4	9	0.160	0.070	-78.26
5	IN	8	180970069	S	803	1	4	12	23	0.090	0.200	75.86
5	IN	8	180970069	S	803	1	2	5	15	0.281	0.150	-60.79
5	MI	1	260812002	S	803	1	3	7	2	0.197	0.397	67.34
5	MI	1	260812002	S	803	1	1	2	2	0.050	0.170	109.09
5	MI	2	261630024	N	803	1	1	2	14	0.040	0.150	115.79
6	AR	1	51191003	N	803	1	2	5	3	5.000	0.060	-195.26
6	NM	1	350130015	S	803	1	2	5	9	0.240	0.070	-109.68
6	TX	1	481410027	N	58	1	1	1	27	0.200	0.080	-85.71
6	TX	1	481410027	N	58	1	1	3	22	0.219	0.109	-67.07
6	TX	1	481410027	N	58	1	2	4	9	0.149	0.280	61.07
6	TX	1	481410027	N	58	1	2	5	9	0.180	0.069	-89.16
7	MO	2	291891002	N	803	1	3	8	1	0.290	0.119	-83.62
7	MO	2	291891002	N	803	1	3	7	20	0.290	0.570	65.12
7	MO	3	295100025	S	803	1	3	8	1	0.000	0.370	200.00
7	MO	7	290990005	S	803	1	2	4	9	0.229	0.119	-63.22
7	MO	7	290990005	S	803	1	3	8	13	0.880	1.980	76.92
7	MO	7	290990005	S	803	1	3	9	18	0.910	0.290	-103.33
8	CO	1	80310002	N	803	1	3	9	30	0.070	0.160	78.26
8	CO	1	80310015	S	803	1	1	1	4	0.300	0.000	-200.00
8	MT	1	300490719	S	57	1	3	9	24	0.300	0.000	-200.00
9	CA	4	60133001	N	803	1	2	4	18	1.010	0.400	-86.52
9	CA	61	60374002	N	803	1	1	1	3	0.270	0.030	-160.00
							3	8	1	0.100	0.190	62.07

POLLUTANT =PM10

REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
3	VA	3	516100004	S	771	1	4	10	6	11.4	29.2	87.68
4	AL	12	10730023	N	771	1	4	10	24	77.0	9999.0	196.94
4	AL	13	10970016	S	771	1	1	3	28	84.0	41.0	-68.80
4	NC	1	370810009	N	771	1	4	11	23	32.0	0.0	-200.00
4	TN	1	471190004	S	771	1	1	1	21	13.0	26.0	66.67
5	OH	3	391431005	S	771	1	2	4	3	15.0	72.0	131.03
5	OH	3	391431005	S	771	1	4	10	24	60.0	29.0	-69.66
7	IA	3	190450018	S	771	1	3	9	30	11.9	24.8	70.30
7	IA	3	190450018	S	771	1	4	11	11	26.3	12.4	-71.83

TABLE A-1. EXTREME PERCENT DIFFERENCES FOR 1987 PARS PRECISION DATA

POLLUTANT =PM10

REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
7	IA	3	190450018	S	771	1	4	11	17	7.7	25.5	107.23
7	MO	1	291270004	S	771	1	2	4	27	20.0	38.0	62.07
8	CO	1	80410011	S	771	1	3	7	2	29.0	0.0	-200.00
8	CO	1	80410011	S	771	1	3	7	8	34.0	0.0	-200.00
8	CO	1	80410011	S	771	1	3	7	14	24.0	0.0	-200.00
8	CO	1	80410011	S	771	1	3	7	20	27.0	0.0	-200.00
8	CO	1	80410011	S	771	1	3	9	6	27.0	0.0	-200.00
8	CO	1	80410011	S	771	1	3	9	12	23.0	0.0	-200.00
8	CO	1	80410011	S	771	1	3	9	18	23.0	0.0	-200.00
8	CO	1	80410011	S	771	1	3	9	24	36.0	0.0	-200.00
8	MT	1	300490001	S	771	1	3	9	30	38.0	0.0	-200.00
8	MT	1	300490001	S	771	1	3	7	14	44.0	21.0	-70.77
8	MT	1	300490001	S	771	1	4	10	30	55.0	14.0	-118.84
							4	12	1	10.0	26.0	88.89

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
1	MA	1	250250021	N	9	7	3	8	10	0.999	0.096	-90.39
3	DE	1	100032001	S	39	7	1	1	22	70.077	0.080	-99.89
3	DE	1	100033001	N	39	7	1	2	12	7.800	0.800	-89.74
4	AL	15	11030007	S	39	7	1	1	21	0.097	0.010	-89.69
4	GA	10	131150003	S	9	7	2	4	28	0.996	0.090	-90.96
4	KY	1	210670012	S	9	7	1	2	2	0.016	0.084	425.00
4	TN	6	470050007	S	11	7	3	9	23	0.180	0.301	67.22
4	TN	6	470050010	S	11	7	2	5	30	0.179	0.000	-100.00
4	TN	6	470050010	S	11	7	2	5	31	0.179	0.000	-100.00
4	TN	6	470550001	S	39	7	2	5	30	0.046	0.000	-100.00
4	TN	6	470550001	S	39	7	2	5	31	0.046	0.000	-100.00
4	TN	6	470550001	S	39	7	2	6	1	0.046	0.000	-100.00
4	TN	6	470550001	S	39	7	3	7	2	0.046	0.091	97.83
4	TN	6	470550001	S	39	7	3	7	3	0.046	0.091	97.83
4	TN	6	470550001	S	39	7	3	7	4	0.046	0.090	95.65
4	TN	6	470550001	S	39	7	3	7	5	0.046	0.091	97.83
4	TN	6	470550001	S	39	7	3	7	6	0.046	0.090	95.65
4	TN	6	470550001	S	39	7	3	7	7	0.046	0.093	102.17
4	TN	6	470550001	S	39	7	3	7	8	0.046	0.090	95.65
4	TN	6	470550001	S	39	7	3	7	9	0.046	0.090	95.65
4	TN	6	470550001	S	39	7	3	7	10	0.046	0.091	97.83
4	TN	6	470550001	S	39	7	3	7	11	0.046	0.091	97.83
4	TN	6	470550001	S	39	7	3	7	12	0.046	0.091	97.83
4	TN	6	470550001	S	39	7	3	7	13	0.046	0.089	93.48
4	TN	6	470550001	S	39	7	3	7	14	0.046	0.090	95.65
4	TN	6	470550001	S	39	7	3	7	15	0.046	0.090	95.65
4	TN	6	470550001	S	39	7	3	7	16	0.046	0.090	95.65
4	TN	6	470550001	S	39	7	3	7	17	0.046	0.090	95.65
4	TN	6	470550001	S	39	7	3	7	18	0.046	0.090	95.65
4	TN	6	470550001	S	39	7	3	7	19	0.046	0.091	97.83
4	TN	6	470550001	S	39	7	3	7	20	0.046	0.091	97.83
									21	0.046	0.090	95.65

TABLE A-1. EXTREME PERCENT DIFFERENCES FOR 1987 PARS PRECISION DATA

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
4	TN	6	470550001	S	39	7	3	7	22	0.046	0.091	97.83
4	TN	6	470550001	S	39	7	3	7	23	0.046	0.090	95.65
4	TN	6	470550001	S	39	7	3	7	24	0.046	0.089	93.48
4	TN	6	470550001	S	39	7	3	7	25	0.046	0.089	93.48
4	TN	6	470550001	S	39	7	3	7	26	0.046	0.088	91.30
4	TN	6	470550001	S	39	7	3	7	27	0.046	0.084	82.61
4	TN	6	470550001	S	39	7	3	7	28	0.046	0.077	67.39
4	TN	6	470550001	S	39	7	3	9	1	0.045	0.092	104.44
4	TN	6	470550001	S	39	7	3	9	2	0.045	0.091	102.22
4	TN	6	470550001	S	39	7	3	9	3	0.045	0.091	102.22
4	TN	6	470550001	S	39	7	3	9	4	0.045	0.093	106.67
4	TN	6	470550001	S	39	7	3	9	5	0.045	0.091	102.22
4	TN	6	470550001	S	39	7	3	9	6	0.045	0.090	100.00
4	TN	6	470550001	S	39	7	3	9	7	0.045	0.091	102.22
4	TN	6	470550001	S	39	7	3	9	8	0.045	0.087	93.33
4	TN	6	470550001	S	39	7	3	9	9	0.045	0.087	93.33
4	TN	6	470550001	S	39	7	3	9	10	0.045	0.086	91.11
4	TN	6	470550001	S	39	7	3	9	11	0.045	0.085	88.89
4	TN	6	470550001	S	39	7	3	9	12	0.045	0.087	93.33
4	TN	6	470550001	S	39	7	3	9	13	0.045	0.087	93.33
4	TN	6	470550001	S	39	7	3	9	14	0.045	0.086	91.11
4	TN	6	470550001	S	39	7	3	9	15	0.045	0.086	91.11
4	TN	6	470550001	S	39	7	3	9	16	0.045	0.087	93.33
4	TN	6	470550001	S	39	7	3	9	17	0.045	0.086	91.11
4	TN	6	470550001	S	39	7	3	9	18	0.045	0.087	93.33
4	TN	6	470550001	S	39	7	3	9	19	0.045	0.085	88.89
4	TN	6	470550001	S	39	7	3	9	20	0.045	0.085	88.89
4	TN	6	470550001	S	39	7	3	9	21	0.045	0.085	88.89
4	TN	6	470550001	S	39	7	3	9	22	0.045	0.086	91.11
4	TN	6	470550001	S	39	7	3	9	23	0.045	0.084	86.67
4	TN	6	470550001	S	39	7	3	9	24	0.045	0.086	91.11
4	TN	6	470550001	S	39	7	3	9	25	0.045	0.085	88.89
4	TN	6	470550001	S	39	7	3	9	26	0.045	0.086	91.11
4	TN	6	470550001	S	39	7	3	9	27	0.045	0.084	86.67
4	TN	6	470550001	S	39	7	3	9	28	0.045	0.085	88.89
4	TN	6	470550001	S	39	7	3	9	29	0.045	0.085	88.89
4	TN	6	470550001	S	39	7	3	9	30	0.045	0.084	86.67
4	TN	6	471450008	S	11	7	2	6	2	0.180	0.000	-100.00
4	TN	6	471451003	S	11	7	3	9	26	0.180	0.000	-100.00
4	TN	6	471451003	S	11	7	3	9	27	0.180	0.000	-100.00
4	TN	6	471451003	S	11	7	3	9	28	0.180	0.000	-100.00
9	CA	1	471572001	S	9	7	3	8	12	0.180	0.000	-100.00
9	CA	1	60290004	N	9	7	2	4	23	0.100	9.107	9007.00
9	CA	1	60714001	S	39	7	2	4	29	0.091	0.870	856.04
9	CA	1	60990005	S	9	7	1	2	11	0.095	0.203	113.68
9	CA	1	60990005	S	9	7	1	2	23	0.095	0.207	117.89
9	CA	36	60730001	N	9	7	3	9	1	0.357	0.100	-71.99
9	CA	36	60730001	N	9	7	3	9	28	0.357	0.097	-72.83
9	CA	61	60372005	N	9	7	2	4	17	0.093	0.819	780.65

TABLE A-1. EXTREME PERCENT DIFFERENCES FOR 1987 PARS PRECISION DATA

POLLUTANT =TSP

REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
1	ME	112	230290007	S	802	1	1	1	14	36.3	19.00	-62.57
1	MA	1	250250027	N	802	1	3	7	14	220.0	114.00	-63.47
3	DE	1	100030010	S	802	1	2	4	21	74.0	34.00	-74.07
3	DE	1	100031003	N	802	1	3	9	6	0.0	29.00	200.00
3	WV	1	540392002	N	802	1	1	1	3	33.0	0.03	-199.60
3	WV	2	540690008	N	802	1	1	1	3	28.0	0.03	-199.60
4	AL	14	10890014	N	802	1	2	6	19	43.0	23.00	-60.61
4	FL	1	120570016	S	802	1	3	7	8	35.0	76.00	73.87
4	FL	11	120310053	S	802	1	2	5	9	80.0	8100.00	196.09
4	FL	14	120810004	S	802	1	1	1	27	23.0	53.00	78.95
4	FL	14	120810014	S	802	1	2	6	14	32.0	60.00	60.87
4	FL	14	120810014	S	802	1	3	8	7	51.0	18.00	-95.65
4	FL	16	120990005	S	802	1	1	1	21	92.0	48.00	-62.86
4	MS	100	280670002	S	802	1	4	12	17	16.0	31.00	63.83
4	NC	1	371330004	S	802	1	2	4	15	24.0	51.00	72.00
4	NC	1	371330004	S	802	1	2	5	9	25.0	52.00	70.13
4	TN	3	470370002	N	802	1	1	3	4	82.0	0.00	-200.00
5	IL	1	171190010	S	802	1	2	4	15	64.0	33.00	-63.92
5	IL	1	171193007	N	802	1	4	12	29	23.0	6.00	-117.24
5	MI	1	261450002	N	802	1	4	10	30	85.0	44.00	-63.57
5	OH	2	390930026	N	802	1	4	12	5	18.0	39.00	73.68
5	OH	3	391390007	N	802	1	2	4	27	90.0	40.00	-76.92
5	OH	9	390350026	N	802	1	4	10	18	88.0	43.00	-68.70
5	OH	9	390350042	N	802	1	2	4	3	84.0	34.00	-84.75
5	OH	9	390350042	N	802	1	4	11	23	79.0	38.00	-70.09
5	OH	9	390350045	S	802	1	4	11	17	78.0	148.00	61.95
7	IA	3	190330011	S	802	1	3	9	12	9.8	20.40	70.20
7	NE	1	310190001	S	802	1	4	12	11	37.3	17.70	-71.27
8	CO	1	80310001	N	802	1	1	1	2	97.0	0.00	-200.00
8	CO	1	80310001	N	802	1	1	1	3	0.0	96.00	200.00
8	CO	1	80310001	N	802	1	1	2	1	155.0	0.00	-200.00
8	CO	1	80310001	N	802	1	1	2	2	0.0	149.00	200.00
8	CO	1	80310015	S	802	1	3	8	7	102.0	0.00	-200.00
8	CO	1	80310015	S	802	1	3	9	6	0.0	74.00	200.00
8	CO	1	80410009	N	802	1	1	1	15	0.0	24.00	200.00
8	CO	1	80410009	N	802	1	1	1	27	93.0	0.00	-200.00
8	CO	1	80410009	N	802	1	1	3	4	191.0	0.00	-200.00
8	CO	1	80410009	N	802	1	1	3	10	132.0	0.00	-200.00
8	MT	1	300490719	S	802	1	3	7	8	0.0	86.00	200.00
8	MT	1	300530012	S	802	1	4	11	23	88.0	32.00	-93.33
9	AZ	300	40190011	S	802	1	3	7	2	123.0	50.00	-84.39
9	AZ	300	40191001	N	802	1	2	5	9	3062.0	68.00	-191.31
9	CA	1	60290003	N	802	1	2	5	27	3062.0	75.00	-190.44
9	CA	1	60292003	S	802	1	4	11	17	0.0	62.00	200.00
9	CA	1	60510001	S	802	1	2	5	15	131.0	13.00	-163.89
9	CA	61	60374002	N	802	1	4	11	29	71.0	15.00	-130.23
9	HI	120	150030009	S	802	1	3	9	24	88.0	233.00	90.34
						1	1	2	8	28.1	58.90	70.80

TABLE A-2. EXTREME PERCENT DIFFERENCES FOR 1987 PARS ACCURACY DATA

TABLE A-2. EXTREME PERCENT DIFFERENCES FOR 1987 PARS ACCURACY DATA

POLLUTANT =CO

LEVEL	REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
1	9	AZ	200	40131003	S	12	7	4	12	3	0.001	0.2	19900
1	9	AZ	200	40133003	N	54	7	4	12	3	0.001	0.2	19900
1	9	AZ	200	40132004	S	54	7	4	12	9	0.001	0.1	9900

POLLUTANT =O3

LEVEL	REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
1	3	DE	1	100031003	N	4	7	1	1	20	0.090	0.900	900.000
1	9	AZ	200	40131004	S	19	7	3	8	12	0.003	0.006	100.000
1	9	AZ	200	40133003	N	19	7	4	12	3	0.003	0.007	133.333
3	1	MA	1	250051001	N	47	7	2	4	16	0.394	0.984	149.746

POLLUTANT =PB_FLOW

LEVEL	REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
2	6	TX	1	483550026	N	803	72	2	5	20	39	0.0	-100
2	6	TX	1	483550026	N	803	83	2	5	25	1	1.7	70

POLLUTANT =SO2

LEVEL	REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
1	1	NH	1	330071007	S	39	7	3	9	23	0.70	0.07	-89.571
1	9	CA	61	60712002	N	9	7	1	1	27	0.08	0.83	964.103
3	6	OK	102	401090018	N	9	1	1	3	12	1063.00	1949.00	83.349

POLLUTANT =TSP

LEVEL	REGION	STATE	REPORTING ORGANIZATION	SITE	NAMS/ SLAMS	METH	UNIT	QTR	MONTH	DAY	DESIGNATED	INDICATED	PERCENT DIFFERENCE
2	10	WA	1	530030003	S	802	83	2	6	15	0.028	0	-100

APPENDIX B

SUMMARY STATISTICS AND HISTOGRAMS

TABLE B-1. SUMMARY STATISTICS FOR 1987 PARS PRECISION DATA

TABLE B-1. SUMMARY STATISTICS FOR 1987 PARS PRECISION DATA

POLLUTANT =CO

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	13347	SUM WGTS	13347
MEAN	0.0951311	SUM	1269.71
STD DEV	4.89445	VARIANCE	23.9556
SKEWNESS	0.456191	KURTOSIS	5.06582
USS	319833	CSS	319712
CV	5144.95	STD MEAN	0.0423655
T:MEAN=0	2.24549	PROB>|T|	0.0247532
SGN RANK	-187078	PROB>|S|	0.620423
NUM ^= 0	11963		
D:NORMAL	0.0777134	PROB>D	<.01

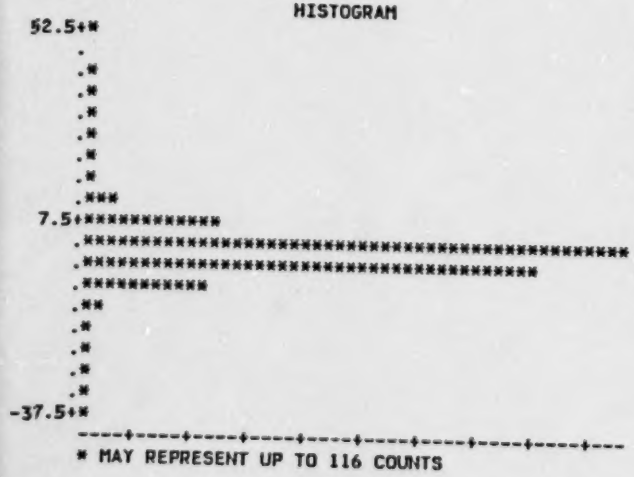
QUANTILES(DEF=4)

100% MAX	51.4865	99%	13.8462
75% Q3	2.37069	95%	8.24742
50% MED	0	90%	5.76923
25% Q1	-2.51572	10%	-5.40541
0% MIN	-38.9619	5%	-7.21649
		1%	-11.8924
RANGE	90.4483		
Q3-Q1	4.88641		
MODE	0		

EXTREMES

LOWEST	ID	HIGHEST	ID
-38.9619	(CALIFORN)	36.1702	(NEW YORK)
-35.5556	(CALIFORN)	36.4619	(TEXAS)
-30.6931	(NORTH CA)	40.5309	(FLORIDA)
-29.2453	(KANSAS)	41.9226	(TEXAS)
-27.3256	(KANSAS)	51.4865	(CALIFORN)

HISTOGRAM



#	BOXPLOT
1	*
2	*
2	*
4	*
2	*
21	*
66	0
295	0
1301	0
5546	*--+--*
4609	+-----+
1253	0
191	0
40	0
8	*
3	*
1	*
2	*

NORMAL PROBABILITY PLOT

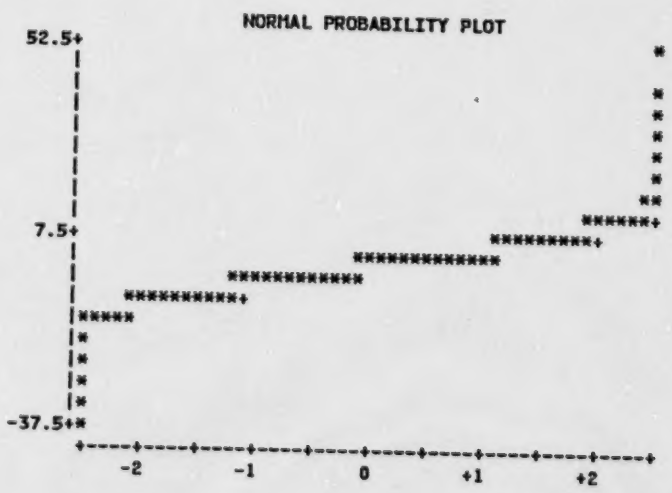


TABLE B-1. SUMMARY STATISTICS FOR 1987 PARS PRECISION DATA

POLLUTANT =NO2

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

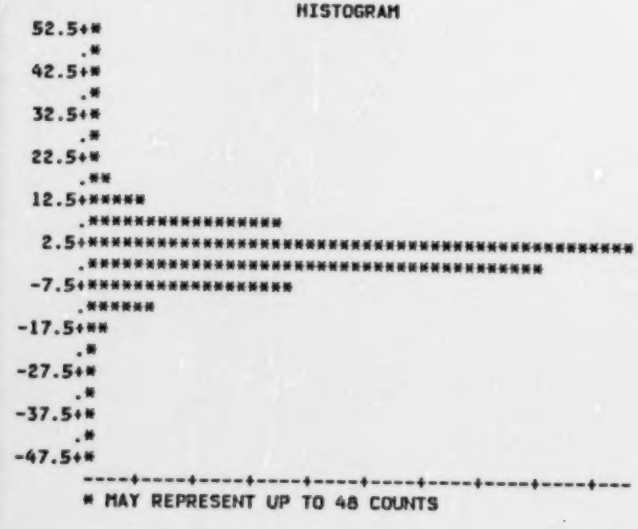
MOMENTS

N	6410	SUM WGTS	6410	100% MAX	50.7042	99%	17.5229	LOWEST ID	HIGHEST ID
MEAN	-0.316074	SUM	-2026.03	75% Q3	3.28319	95%	10	-47.0588(CALIFORN)	41.1111(CALIFORN)
STD DEV	6.73672	VARIANCE	45.3833	50% MED	0	90%	7.14286	-41.1765(CALIFORN)	46.6667(NEW YORK)
SKEWNESS	0.0130395	KURTOSIS	5.76914	25% Q1	-3.52941	10%	-7.77778	-41.1765(CALIFORN)	46.6667(NEW YORK)
USS	291502	CSS	290862	0% MIN	-47.0588	5%	-10.6511	-41.1765(CALIFORN)	47.0588(FLORIDA)
CV	-2131.37	STD MEAN	0.0841432			1%	-18.4454	-41.1765(CALIFORN)	50.7042(MISSOURI)
T:MEAN=0	-3.75638	PROB>|T|	.000173918	RANGE	97.763				
SGN RANK	-511450	PROB>|S|	0.0001	Q3-Q1	6.8126				
NUM ^= 0	5735			MODE	0				
D:NORMAL	0.067705	PROB>D	<.01						

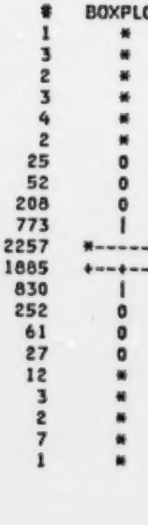
QUANTILES(DEF=4)

EXTREMES

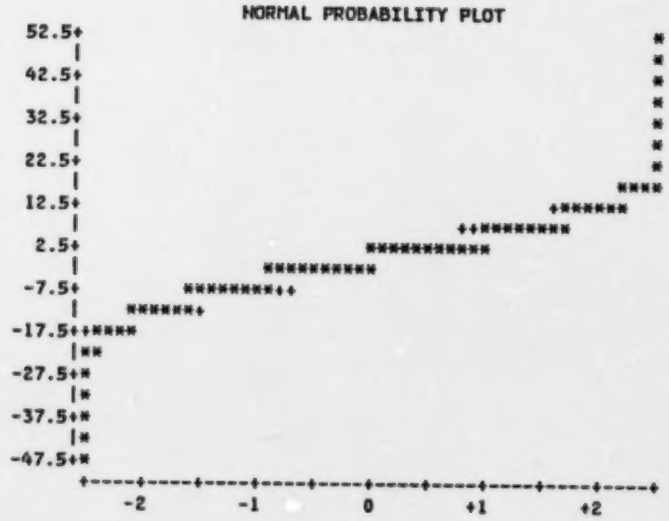
HISTOGRAM



BOXPLOT



NORMAL PROBABILITY PLOT



B-4

TABLE B-1. SUMMARY STATISTICS FOR 1987 PARS PRECISION DATA

POLLUTANT =03

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	17018	SUM WGTS	17018		
MEAN	-0.716731	SUM	-12197.3		
STD DEV	5.62495	VARIANCE	31.64		
SKEWNESS	-0.0484836	KURTOSIS	7.34786		
USS	547160	CSS	538418		
CV	-784.805	STD MEAN	0.0431185		
T:MEAN=0	-16.6223	PROB>|T|	0.0001		
SGN RANK	-9812209	PROB>|S|	0.0001		
NUM ^= 0	14886				
D:NORMAL	0.07902	PROB>D	<.01		

QUANTILES(DEF=4)

100% MAX	44.4444	99%	14.4444
75% Q3	2.17391	95%	7.69231
50% MED	0	90%	5
25% Q1	-3.40909	10%	-6.93069
0% MIN	-58.8235	5%	-9.47368
		1%	-16.1139
RANGE	103.268		
Q3-Q1	5.583		
MODE	0		

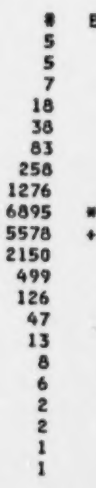
EXTREMES

LOWEST	ID	HIGHEST	ID
-58.8235	(CALIFORN)	40.2439	(TEXAS)
-54.9451	(KENTUCKY)	40.2439	(TEXAS)
-48.9583	(CALIFORN)	41.4634	(TEXAS)
-45.8333	(CALIFORN)	44.4444	(CALIFORN)
-43.1818	(COLORADO)	44.4444	(CALIFORN)

HISTOGRAM

* MAY REPRESENT UP TO 144 COUNTS

BOXPLOT



NORMAL PROBABILITY PLOT

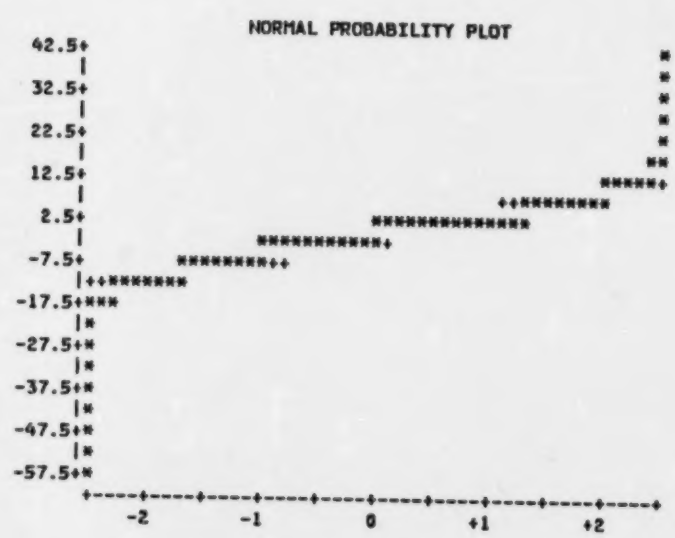


TABLE B-1. SUMMARY STATISTICS FOR 1987 PARS PRECISION DATA

POLLUTANT =PB

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	1247	SUM WGTS	1247
MEAN	-1.63342	SUM	-2036.87
STD DEV	16.2906	VARIANCE	265.383
SKEWNESS	-0.0737666	KURTOSIS	2.12674
USS	333994	CSS	330667
CV	-997.33	STD MEAN	0.461321
T:MEAN=0	-3.54074	PROB>|T|	.000413719
SGN RANK	-36810.5	PROB>|S|	.000277394
NUM ^= 0	1071		
D:NORMAL	0.0998242	PROB>D	<.01

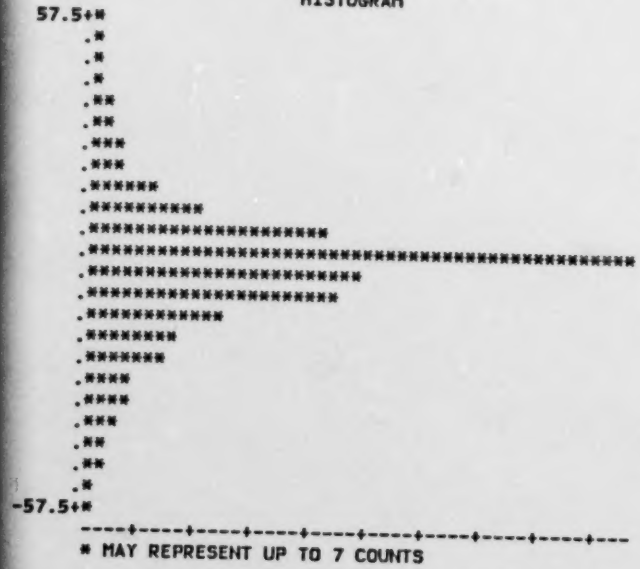
QUANTILES(DEF=4)

100% MAX	56.3333	99%	47.6747
75% Q3	5.55556	95%	25.4545
50% MED	0	90%	14.5148
25% Q1	-8.47784	10%	-21.428
0% MIN	-58.0645	5%	-32.002
		1%	-48.6096
RANGE	116.398		
Q3-Q1	14.0334		
MODE	0		

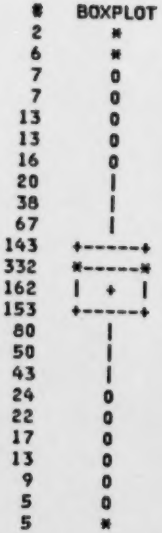
EXTREMES

LOWEST	ID	HIGHEST	ID
-58.0645	(TEXAS)	52.0548	(IOWA)
-58.0645	(ALABAMA)	52.1739	(MONTANA)
-56	(NEW YORK)	54.9153	(INDIANA)
-55.0725	(ALABAMA)	57.1429	(MONTANA)
-55.0562	(ALABAMA)	58.3333	(TENNESSE)

HISTOGRAM



BOXPLOT



NORMAL PROBABILITY PLOT

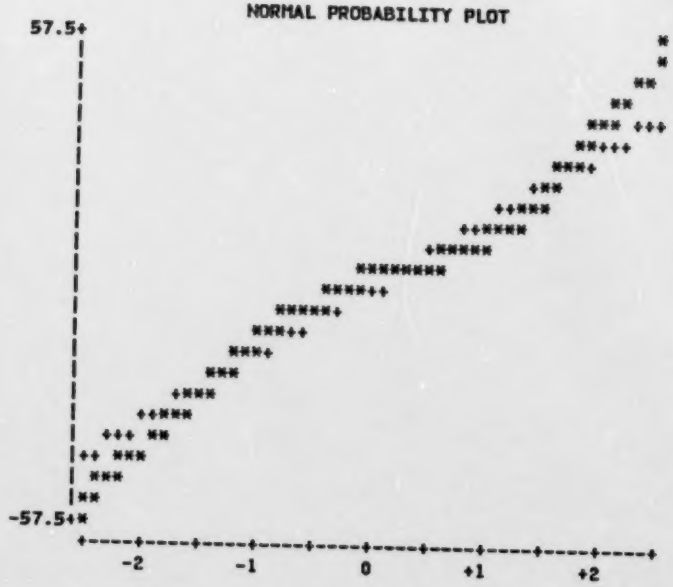


TABLE B-1. SUMMARY STATISTICS FOR 1987 PARS PRECISION DATA

POLLUTANT =PM10

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	1936	SUM WGTS	1936
MEAN	1.28434	SUM	2486.47
STD DEV	11.4081	VARIANCE	130.145
SKEWNESS	0.351377	KURTOSIS	4.07371
USS	255025	CSS	251831
CV	888.251	STD MEAN	0.259276
T:MEAN=0	4.95355	PROB>|T|	0.0001
SGN RANK	91467.5	PROB>|S|	0.0001
NUM ~= 0	1702		
D:NORMAL	0.102085	PROB>D	<.01

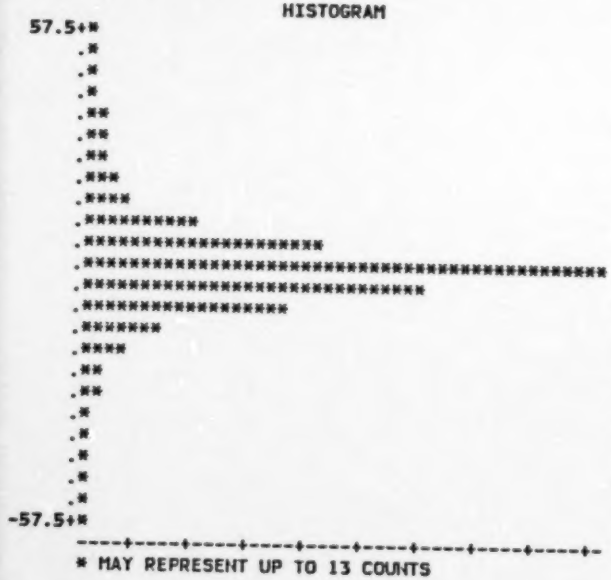
QUANTILES(DEF=4)

100% MAX	56.4706	99%	38.7097
75% Q3	5.94059	95%	21.2831
50% MED	0	90%	13.3715
25% Q1	-4.16667	10%	-9.59182
0% MIN	-55.7377	5%	-14.9254
		1%	-31.0584
RANGE	112.208		
Q3-Q1	10.1073		
MODE	0		

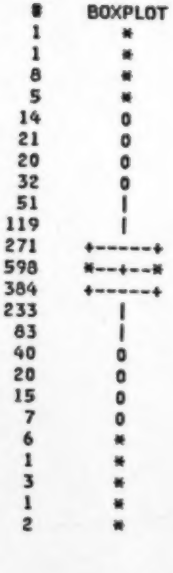
EXTREMES

LOWEST	ID	HIGHEST	ID
-55.7377	(FLORIDA)	48.2759	(ALABAMA)
-55.2632	(CALIFORN)	48.8889	(VERMONT)
-54.1176	(MICHIGAN)	49.2125	(DELAWARE)
-48.1013	(UTAH)	51.0092	(IOWA)
-47.2362	(MONTANA)	56.4706	(IOWA)

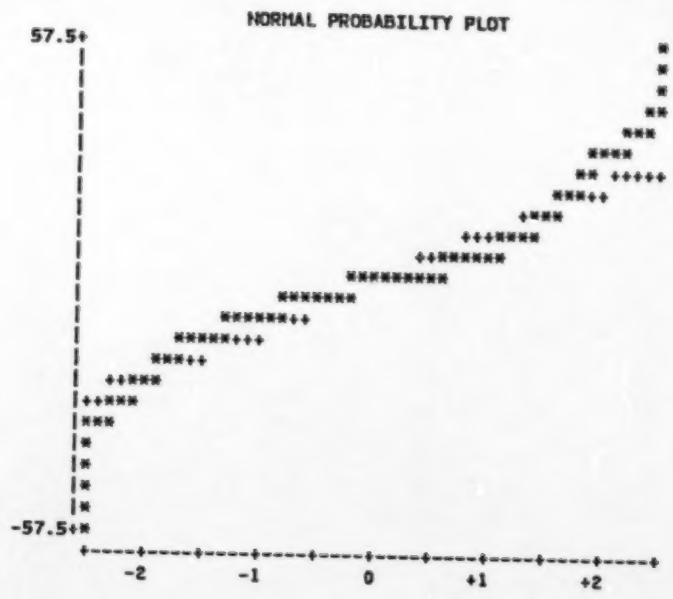
HISTOGRAM



BOXPLOT



NORMAL PROBABILITY PLOT



B-7

TABLE B-1. SUMMARY STATISTICS FOR 1987 PARS PRECISION DATA

POLLUTANT =SO2

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	24908	SUM WGTS	24908
MEAN	-0.8744	SUM	-21779.6
STD DEV	5.55928	VARIANCE	30.9056
SKEWNESS	-0.047671	KURTOSIS	4.12884
USS	788810	CSS	769766
CV	-635.782	STD MEAN	0.0352249
T:MEAN=0	-24.8234	PROB>|T|	0.0001
SGN RANK	-24784747	PROB>|S|	0.0001
NUM ^= 0	22275		
D:NORMAL	0.0580534	PROB>D	<.01

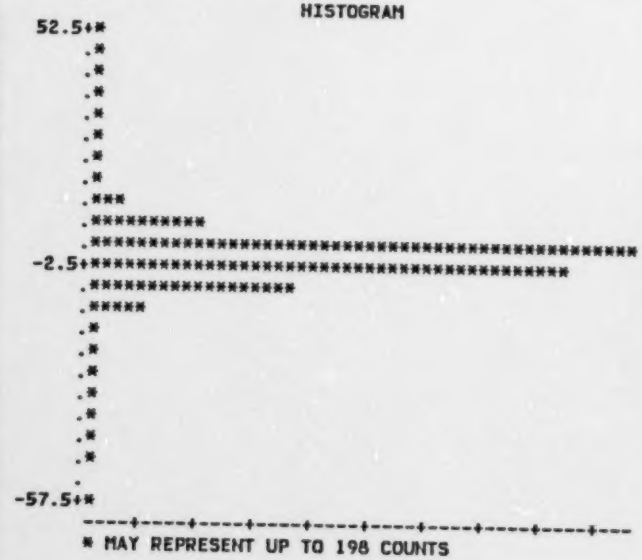
QUANTILES(DEF=4)

100% MAX	54.3478	99%	13.7218
75% Q3	2.22222	95%	7.6087
50% MED	-0.555556	90%	5.26316
25% Q1	-3.88889	10%	-7.31707
0% MIN	-57.2222	5%	-10
		1%	-15.5556
RANGE	111.57		
Q3-Q1	6.11111		
MODE	0		

EXTREMES

LOWEST	ID	HIGHEST	ID
-57.2222	(TENNESSE)	36.5591	(CALIFORN)
-45.2632	(CALIFORN)	40.1869	(CALIFORN)
-41.6667	(TENNESSE)	44.186	(MONTANA)
-41.1765	(CALIFORN)	48.3333	(KENTUCKY)
-39.2265	(TENNESSE)	54.3478	(TENNESSE)

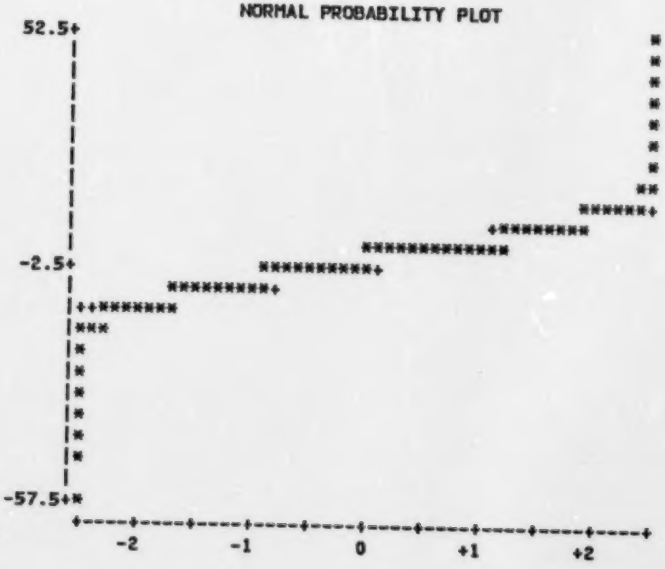
HISTOGRAM



* MAY REPRESENT UP TO 198 COUNTS

#	BOXPLOT
1	*
1	*
2	*
2	*
4	*
7	*
44	0
115	0
464	0
1967	|
9477	+------+
8194	*--+--*
3461	|
900	0
170	0
78	0
12	*
4	*
1	*
2	*
1	*
1	*

NORMAL PROBABILITY PLOT



B-4

TABLE B-1. SUMMARY STATISTICS FOR 1987 PARS PRECISION DATA

POLLUTANT =TSP

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	14909	SUM WGTS	14909
MEAN	0.0768653	SUM	1145.98
STD DEV	8.49566	VARIANCE	72.1763
SKEWNESS	-0.0998246	KURTOSIS	5.9947
USS	1076092	CSS	1076004
CV	11052.7	STD MEAN	0.0695782
T:MEAN=0	1.10473	PROB>|T|	0.269293
SGN RANK	940718	PROB>|S|	0.0305879
NUM ^= 0	13144		
D:NORMAL	0.0726938	PROB>D	<.01

QUANTILES(DEF=4)

100% MAX	57.9173	99%	23.7826
75% Q3	4.25532	95%	12.4302
50% MED	0	90%	8.95522
25% Q1	-4.02684	10%	-8.69565
0% MIN	-58.8235	5%	-12.766
		1%	-25
RANGE	116.741		
Q3-Q1	8.28216		
MODE	0		

EXTREMES

LOWEST	ID	HIGHEST	ID
-58.8235	(KENTUCKY)	54.1471	(SOUTH DA)
-56.5217	(INDIANA)	54.5455	(INDIANA)
-56.4103	(OHIO)	56.3107	(DISTRICT)
-53.8462	(MISSISSI)	56.7901	(OHIO)
-53.6585	(FLORIDA)	57.9173	(NEW MEXI)

HISTOGRAM

#	BOXPLOT
3	*
6	*
8	*
12	*
25	*
19	*
54	0
126	0
221	0
714	|
2012	|
5272	*--+--*
3403	+-----+
1855	|
664	|
238	0
130	0
68	0
31	*
18	*
9	*
10	*
8	*
3	*

NORMAL PROBABILITY PLOT

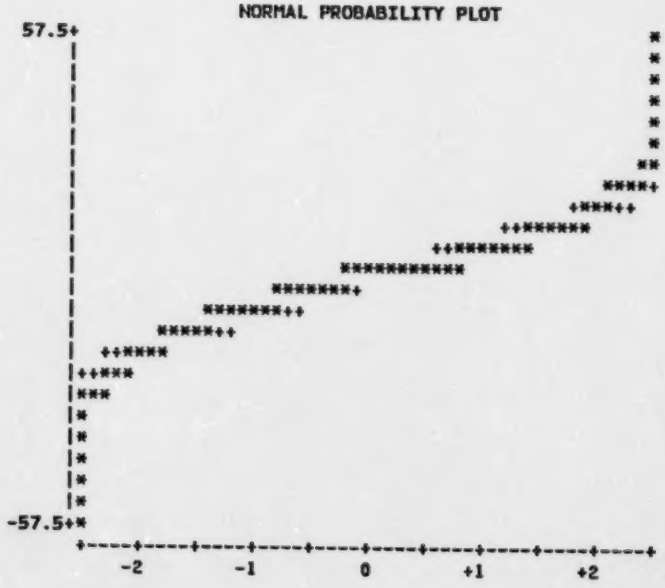


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =CO LEVEL=1

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	1004	SUM WGTS	1004
MEAN	0.140355	SUM	140.917
STD DEV	7.51927	VARIANCE	56.5394
SKEWNESS	-0.475832	KURTOSIS	6.06747
USS	56728.8	CSS	56709
CV	5357.32	STD MEAN	0.237306
T:MEAN=0	0.591452	PROB>|T|	0.554351
SGN RANK	2506.5	PROB>|S|	0.758972
NUM ^= 0	928		
D:NORMAL	0.0850538	PROB>D	<.01

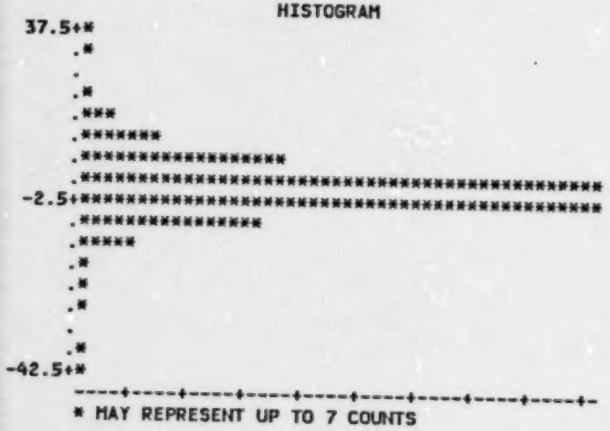
QUANTILES(DEF=4)

100% MAX	39.0244	99%	19.6429
75% Q3	3.51804	95%	12.25
50% MED	0	90%	8.75404
25% Q1	-3.48835	10%	-7.14286
0% MIN	-43.8202	5%	-10.1607
		1%	-23.5484
RANGE	82.8446		
Q3-Q1	7.00638		
MODE	0		

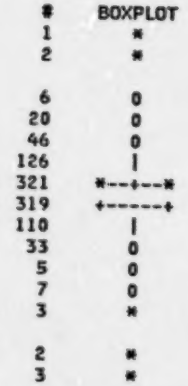
EXTREMES

LOWEST	ID	HIGHEST	ID
-43.8202	(KANSAS)	21.4166	(HAWAII)
-42.4	(NORTH CA)	22.449	(COLORADO)
-41.4286	(NORTH CA)	30.6122	(COLORADO)
-39.2	(NORTH CA)	34.1463	(COLORADO)
-38.4615	(NORTH CA)	39.0244	(COLORADO)

HISTOGRAM



BOXPLOT



NORMAL PROBABILITY PLOT

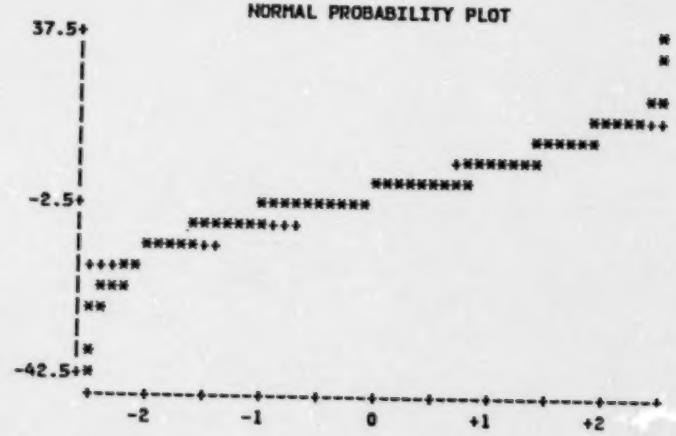


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =CO LEVEL=2

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	888	SUM WGTS	888
MEAN	0.347702	SUM	308.76
STD DEV	3.93083	VARIANCE	15.4514
SKEWNESS	0.277916	KURTOSIS	2.70867
USS	13812.7	CSS	13705.4
CV	1130.51	STD MEAN	0.13191
T:MEAN=0	2.63591	PROB>|T|	0.00853781
SGN RANK	13313.5	PROB>|S|	0.0553012
NUM ^= 0	833		
D:NORMAL	0.0690628	PROB>D	<.01

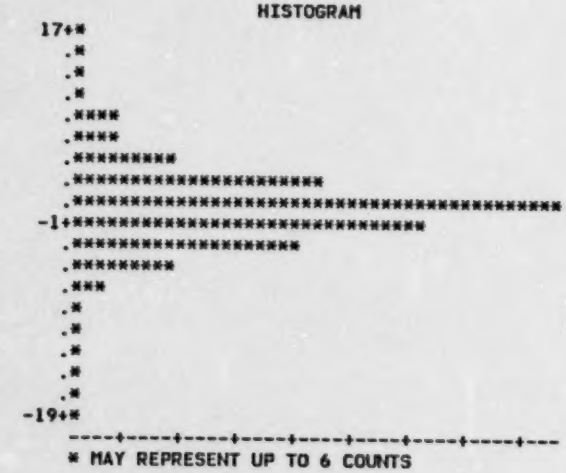
QUANTILES(DEF=4)

100% MAX	16.6667	99%	12.4537
75% Q3	2.25989	95%	7.35114
50% MED	0.107289	90%	4.88192
25% Q1	-1.85107	10%	-3.97351
0% MIN	-18.5268	5%	-5.29801
		1%	-9.555
RANGE	35.1935		
Q3-Q1	4.11096		
MODE	0		

EXTREMES

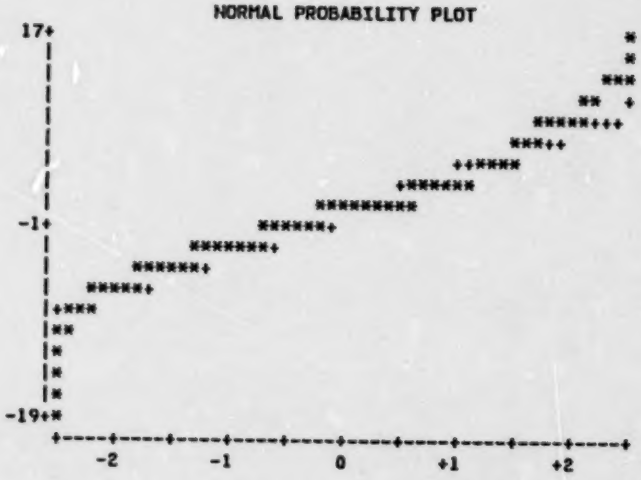
LOWEST	ID	HIGHEST	ID
-18.5268	(OREGON)	14.1361	(OREGON)
-16.7598	(COLORADO)	15.0494	(ALABAMA)
-15.4557	(NEW MEXI)	15.2047	(COLORADO)
-13.1579	(IOWA)	15.6173	(OHIO)
-12.7078	(WEST VIR)	16.6667	(NEW MEXI)

HISTOGRAM



#	BOXPLOT
1	*
4	0
6	0
6	0
19	0
23	|
52	|
131	+-----+
258	*--+--*
184	+-----+
120	|
54	|
17	|
6	0
2	0
2	0
1	*
1	*
1	*

NORMAL PROBABILITY PLOT



B-12

TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =CO LEVEL=3

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	877	SUM WGTS	877
MEAN	-0.0185208	SUM	-16.2427
STD DEV	3.66332	VARIANCE	13.4199
SKEWNESS	-2.50951	KURTOSIS	32.0954
USS	11756.2	CSS	11755.9
CV	-19779.5	STD MEAN	0.123702
T:MEAN=0	-0.149721	PROB>|T|	0.881019
SGN RANK	4665	PROB>|S|	0.512521
NUM ^= 0	847		
D:NORMAL	0.101022	PROB>D	<.01

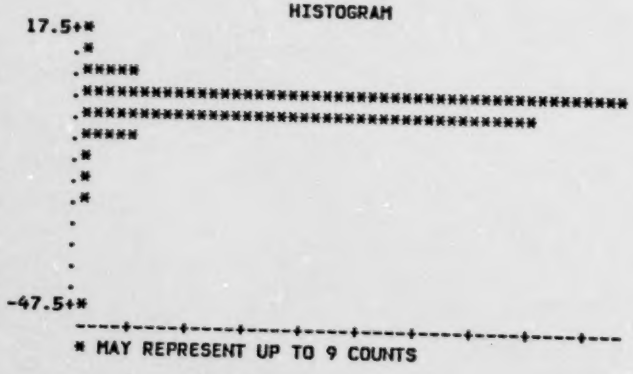
QUANTILES(DEF=4)

100% MAX	15.2709	99%	9.49
75% Q3	1.75549	95%	5.00119
50% MED	0	90%	3.5416
25% Q1	-1.68433	10%	-3.69641
0% MIN	-46.6165	5%	-5.32655
		1%	-9.54782
RANGE	61.8875		
Q3-Q1	3.43981		
MODE	0		

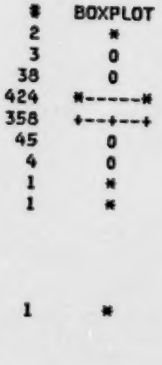
EXTREMES

LOWEST	ID	HIGHEST	ID
-46.6165	(COLORADO)	10.7226	(ILLINOIS)
-20.3497	(OREGON)	12.716	(VIRGINIA)
-16.3636	(NEW MEXI)	14.5102	(OHIO)
-14.2857	(INDIANA)	15.0992	(OHIO)
-12.6984	(INDIANA)	15.2709	(NEW MEXI)

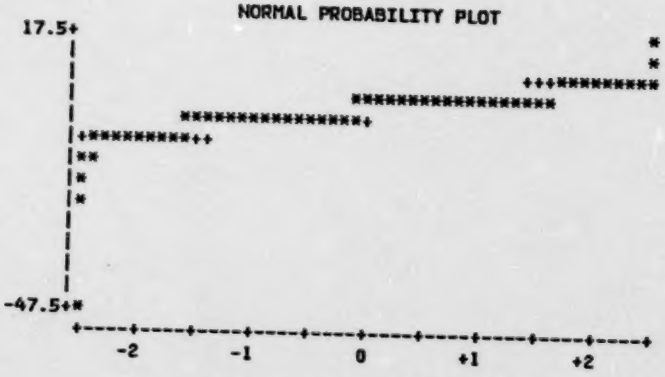
HISTOGRAM



BOXPLOT



NORMAL PROBABILITY PLOT



B-13

TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =CO LEVEL=4

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	6	SUM WGTS	6
MEAN	0.00485625	SUM	0.0291375
STD DEV	2.42621	VARIANCE	5.88649
SKEWNESS	-0.492117	KURTOSIS	-1.34494
USS	29.4326	CSS	29.4324
CV	49960.5	STD MEAN	0.990496
T:MEAN=0	0.00490285	PROB>|T|	0.996278
SGN RANK	0.5	PROB>|S|	1
NUM ^= 0	6		
W:NORMAL	0.91449	PROB<W	0.45

QUANTILES(DEF=4)

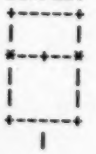
100% MAX	2.52404	99%	2.52404
75% Q3	2.20444	95%	2.52404
50% MED	0.291375	90%	2.52404
25% Q1	-2.07514	10%	-3.61305
0% MIN	-3.61305	5%	-3.61305
		1%	-3.61305
RANGE	6.13709		
Q3-Q1	4.27957		
MODE	-3.61305		

EXTREMES

LOWEST ID	HIGHEST ID
-3.61305(COLORADO)	-1.5625(COLORADO)
-1.5625(COLORADO)	-0.932401(COLORADO)
-0.932401(COLORADO)	1.51515(COLORADO)
1.51515(COLORADO)	2.0979(COLORADO)
2.0979(COLORADO)	2.52404(COLORADO)

```
STEM LEAF                  #
   2 15                    2
   1 5                     1
   0                       
  -0 9                     1
  -1 6                     1
  -2                       
  -3 6                     1
     ----+----+----+----+
```

BOXPLOT



NORMAL PROBABILITY PLOT

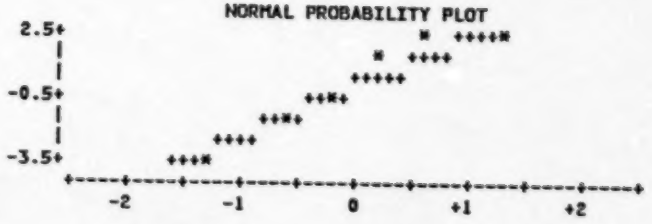


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =NO2 LEVEL=1

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	440	SUM WGTS	440
MEAN	0.760707	SUM	334.711
STD DEV	10.2093	VARIANCE	104.229
SKEWNESS	1.2755	KURTOSIS	11.704
USS	46011.2	CSS	45756.6
CV	1342.08	STD MEAN	0.486708
T:MEAN=0	1.56297	PROB>|T|	0.118781
SGN RANK	4710.5	PROB>|S|	0.0410194
NUM ^= 0	399		
D:NORMAL	0.102923	PROB>D	<.01

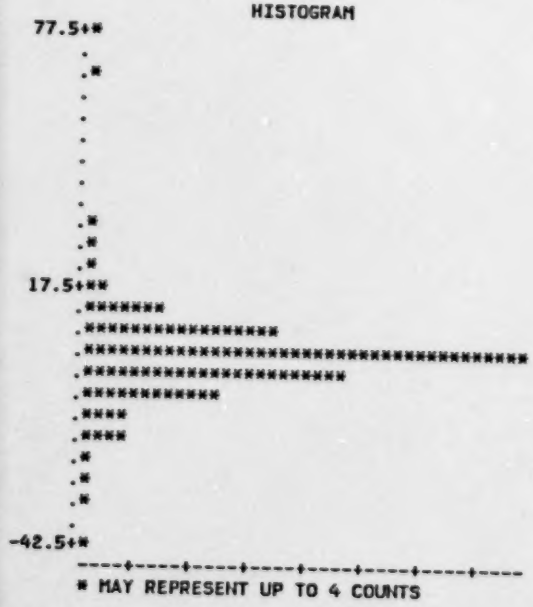
QUANTILES(DEF=4)

100% MAX	75.8621	99%	30.4504
75% Q3	5.13889	95%	14.1353
50% MED	1.17445	90%	10
25% Q1	-3.2006	10%	-9.6122
0% MIN	-40.7895	5%	-15.6184
		1%	-27.5312
RANGE	116.652		
Q3-Q1	8.33949		
MODE	0		

EXTREMES

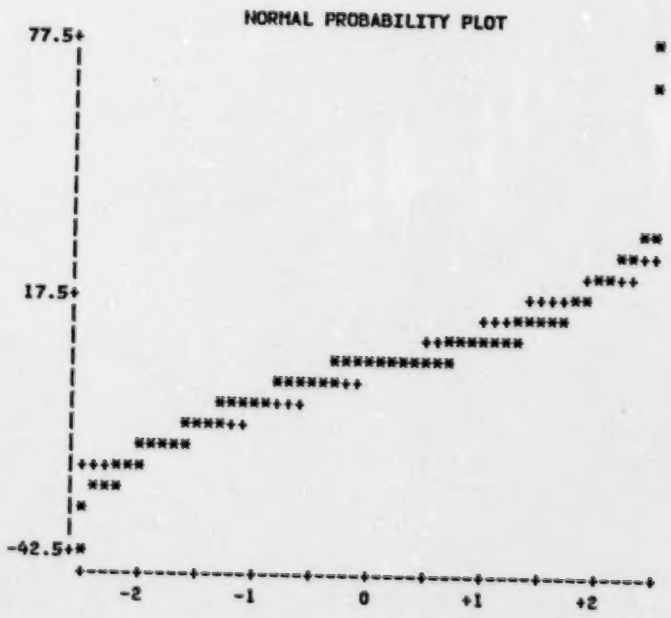
LOWEST	ID	HIGHEST	ID
-40.7895	(UTAH)	27.7778	(UTAH)
-32.8767	(TEXAS)	32.3077	(FLORIDA)
-30.5085	(MISSOURI)	34.5455	(TEXAS)
-27.7108	(OHIO)	68.3333	(NEW YORK)
-27.2727	(KENTUCKY)	75.8621	(NEW YORK)

HISTOGRAM



BOXPLOT

NORMAL PROBABILITY PLOT



B-15

TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =NO2 LEVEL=2

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	387	SUM WGTS	387
MEAN	0.0964158	SUM	37.3129
STD DEV	5.92004	VARIANCE	35.0469
SKEWNESS	0.0662187	KURTOSIS	2.48367
USS	13531.7	CSS	13528.1
CV	6140.12	STD MEAN	0.300933
T:MEAN=0	0.32039	PROB>|T|	0.748846
SGN RANK	1252	PROB>|S|	0.544874
NUM ^= 0	371		
D:NORMAL	0.0498375	PROB>D	0.02

QUANTILES(DEF=4)

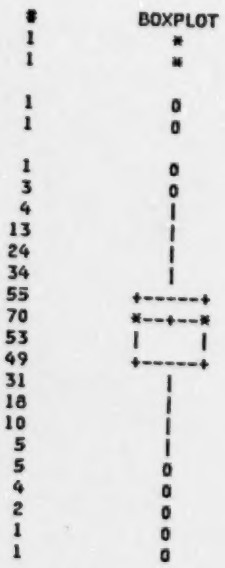
100% MAX	26.3473	99%	19.5572
75% Q3	3.37079	95%	9.07757
50% MED	0	90%	6.75294
25% Q1	-3.10881	10%	-6.71417
0% MIN	-20.8333	5%	-9.7257
		1%	-16.3643
RANGE	47.1806		
Q3-Q1	6.47959		
MODE	0		

EXTREMES

LOWEST	ID	HIGHEST	ID
-20.8333	(UTAH)	14.2045	(VIRGINIA)
-20	(FLORIDA)	19.4969	(FLORIDA)
-17.7419	(OHIO)	20	(KENTUCKY)
-16.1765	(MASSACHU)	24.5283	(NEW YORK)
-15.7303	(COLORADO)	26.3473	(NEW YORK)

HISTOGRAM

BOXPLOT



NORMAL PROBABILITY PLOT

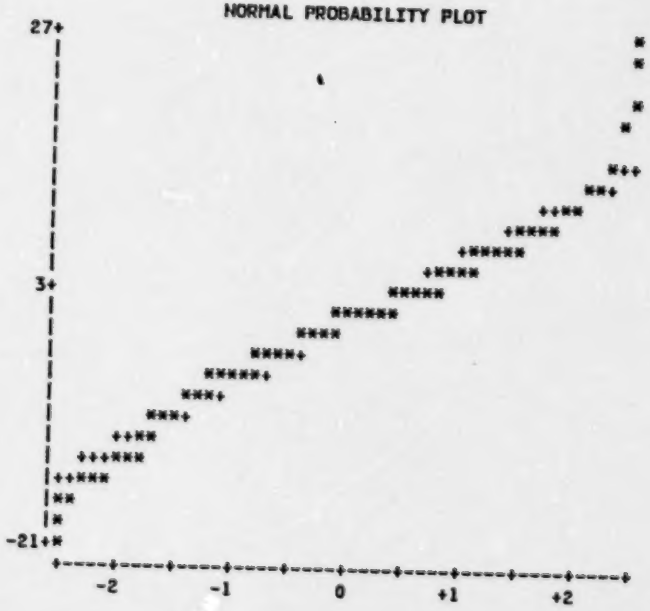


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =NO2 LEVEL=3

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	380	SUM WGTS	380
MEAN	-0.218612	SUM	-83.0724
STD DEV	5.29515	VARIANCE	28.0387
SKEWNESS	0.0796835	KURTOSIS	1.75988
USS	10644.8	CSS	10626.6
CV	-2422.17	STD MEAN	0.271636
T:MEAN=0	-0.804797	PROB>|T|	0.421441
SGN RANK	-1497.5	PROB>|S|	0.463504
NUM ~= 0	368		
D:NORMAL	0.0447669	PROB>D	0.064

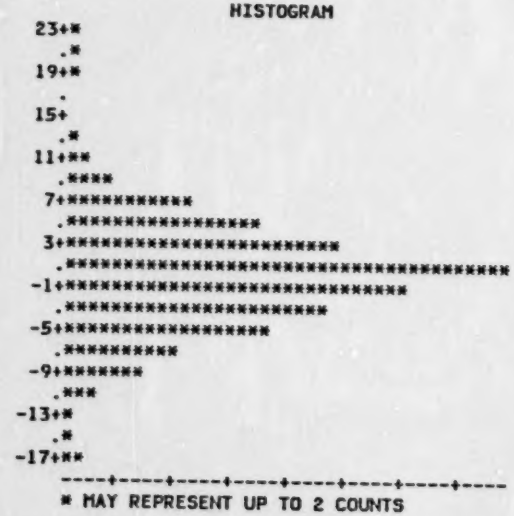
QUANTILES(DEF=4)

100% MAX	22.0339	99%	13.6555
75% Q3	3.18888	95%	7.83544
50% MED	0	90%	5.97443
25% Q1	-3.5205	10%	-6.5263
0% MIN	-17.4564	5%	-8.77778
		1%	-15.2594
RANGE	39.4903		
Q3-Q1	6.70938		
MODE	0		

EXTREMES

LOWEST	ID	HIGHEST	ID
-17.4564	(DISTRICT)	11.9318	(NEW YORK)
-17.4142	(OHIO)	12.3249	(PENNSYLV)
-16.2602	(COLORADO)	19.3277	(FLORIDA)
-15.0246	(CALIFORN)	20.1133	(KENTUCKY)
-14.5729	(CALIFORN)	22.0339	(FLORIDA)

HISTOGRAM



#	BOXPLOT
1	0
1	0
1	0
1	|
4	|
8	|
21	|
33	|
47	+-----+
77	*-----*
60	| + |
46	+-----+
35	|
20	|
13	|
5	|
2	0
2	0
3	0

NORMAL PROBABILITY PLOT

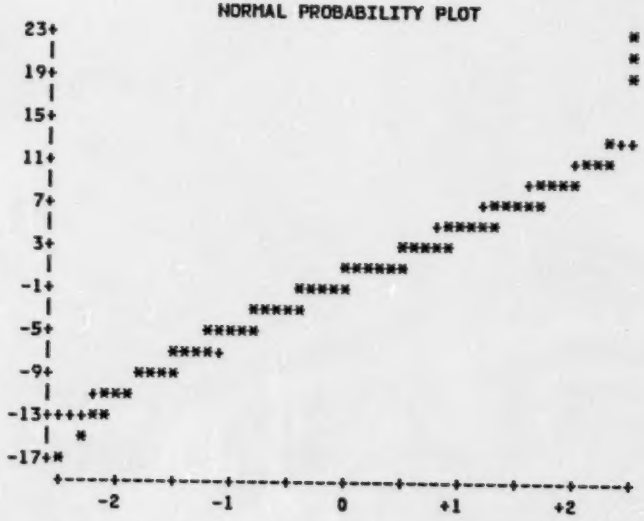


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =NO2 LEVEL=3

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	380	SUM WGTS	380
MEAN	-0.218612	SUM	-83.0724
STD DEV	5.29515	VARIANCE	28.0387
SKEWNESS	0.0796835	KURTOSIS	1.75988
USS	10644.8	CSS	10626.6
CV	-2422.17	STD MEAN	0.271636
T:MEAN=0	-0.804797	PROB>|T|	0.421441
SGN RANK	-1497.5	PROB>|S|	0.463504
NUM ^= 0	368		
D:NORMAL	0.0447669	PROB>D	0.064

QUANTILES(DEF=4)

100% MAX	22.0339	99%	13.6555
75% Q3	3.18888	95%	7.83544
50% MED	0	90%	5.97443
25% Q1	-3.5205	10%	-6.5263
0% MIN	-17.4564	5%	-8.77778
		1%	-15.2594
RANGE	39.4903		
Q3-Q1	6.70938		
MODE	0		

EXTREMES

LOWEST ID	HIGHEST ID
-17.4564(DISTRICT)	11.9318(NEW YORK)
-17.4142(OHIO)	12.3249(PENNSYLV)
-16.2602(COLORADO)	19.3277(FLORIDA)
-15.0246(CALIFORN)	20.1133(KENTUCKY)
-14.5729(CALIFORN)	22.0339(FLORIDA)

HISTOGRAM

1	0
1	0
1	0
1	|
4	|
8	|
21	|
33	|
47	+-----+
77	*-----*
60	| + |
46	+-----+
35	|
20	|
13	|
5	|
2	0
2	0
3	0

BOXPLOT

NORMAL PROBABILITY PLOT

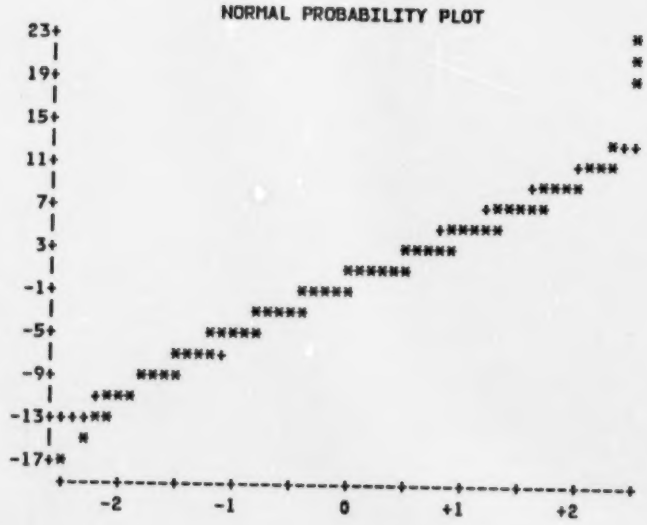


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =O3 LEVEL=1

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	1336	SUM WGTS	1336
MEAN	-0.815315	SUM	-1089.26
STD DEV	6.50487	VARIANCE	42.3133
SKEWNESS	0.660747	KURTOSIS	12.8861
USS	57376.4	CSS	56488.3
CV	-797.835	STD MEAN	0.177965
T:MEAN=0	-4.58132	PROB>|T|	0.0001
SGN RANK	-66475	PROB>|S|	0.0001
NUM ¬= 0	1169		
D:NORMAL	0.0833516	PROB>D	<.01

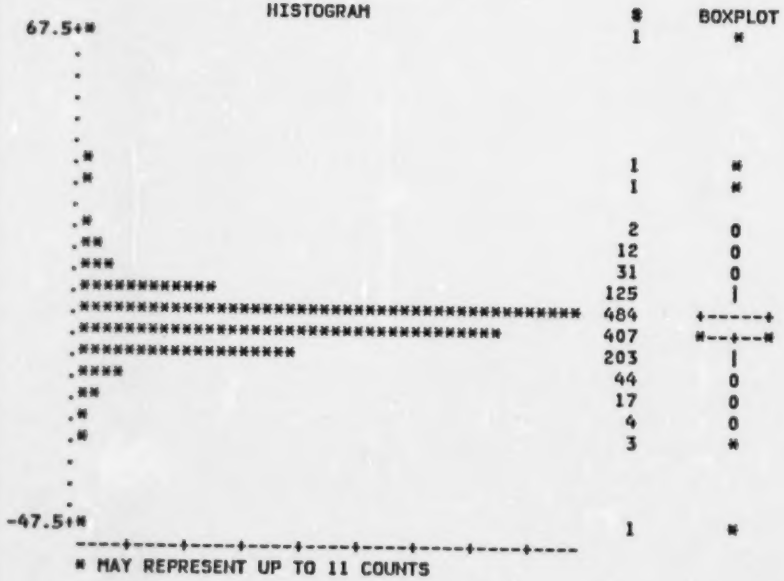
QUANTILES(DEF=4)

100% MAX	66.6667	99%	16.6463
75% Q3	2.29232	95%	9.23077
50% MED	-0.995049	90%	6.27373
25% Q1	-4.05405	10%	-7.72228
0% MIN	-48.4848	5%	-10.3515
		1%	-19.6303
RANGE	115.152		
Q3-Q1	6.34637		
MODE	0		

EXTREMES

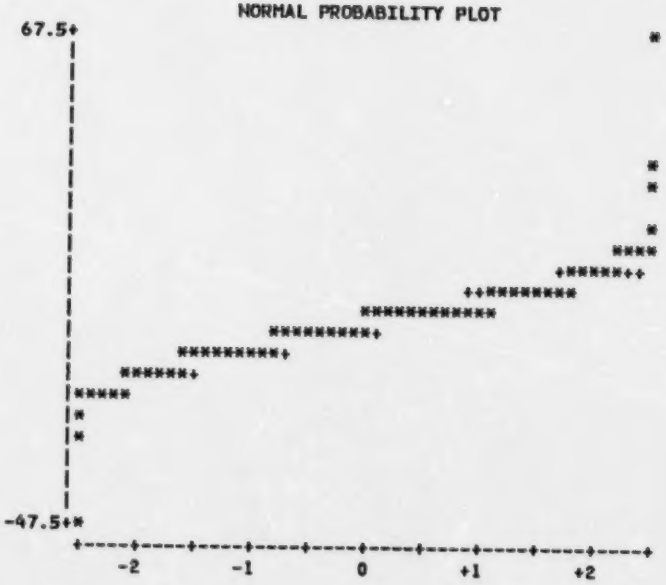
LOWEST ID	HIGHEST ID
-48.4848(OHIO)	21.0526(INDIANA)
-30(CALIFORN)	22.4414(SOUTH CA)
-26.7857(SOUTH CA)	32.6923(TEXAS)
-25.6757(TENNESSE)	37.6033(SOUTH CA)
-23.5294(TEXAS)	66.6667(ARIZONA)

HISTOGRAM



#	BOXPLOT
1	*
1	*
1	*
2	0
12	0
31	0
125	|
484	+-----+
407	*--+--*
203	|
44	0
17	0
4	0
3	*
1	*

NORMAL PROBABILITY PLOT



B-18

TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =O3 LEVEL=2

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	1238	SUM WGTS	1238
MEAN	-0.735558	SUM	-910.621
STD DEV	5.18634	VARIANCE	26.8981
SKEWNESS	-2.83988	KURTOSIS	28.6838
USS	33942.8	CSS	33273
CV	-705.089	STD MEAN	0.147401
T:MEAN=0	-4.99018	PROB>|T|	0.0001
SGN RANK	-60016.5	PROB>|S|	0.0001
NUM ^= 0	1155		
D:NORMAL	0.0919076	PROB>D	<.01

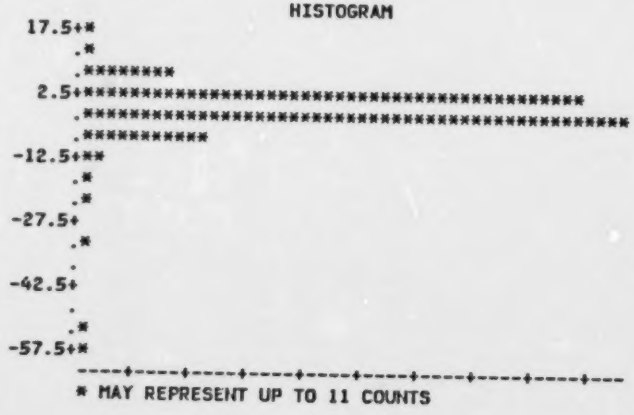
QUANTILES(DEF=4)

100% MAX	19.0476	99%	10.7575
75% Q3	1.80997	95%	6.2543
50% MED	-0.555556	90%	4.54776
25% Q1	-3.08801	10%	-5.41281
0% MIN	-55.4913	5%	-7.64729
		1%	-14.2964
RANGE	74.5389		
Q3-Q1	4.89798		
MODE	0		

EXTREMES

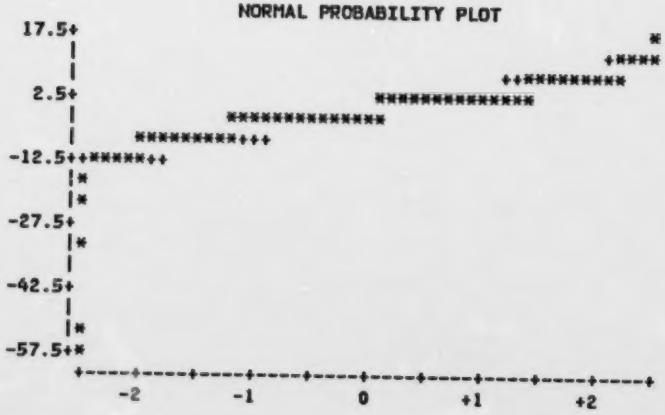
LOWEST	ID	HIGHEST	ID
-55.4913	(CONNECTI)	15.544	(KENTUCKY)
-54.023	(NEW HAMP)	16.2304	(KENTUCKY)
-53.6842	(MAINE)	16.5829	(KENTUCKY)
-30.4348	(TEXAS)	17.5439	(TEXAS)
-22.8758	(TENNESSE)	19.0476	(TENNESSE)

HISTOGRAM



#	BOXPLOT
6	0
11	0
83	0
475	+-----+
520	*--+--*
113	|
21	0
4	*
1	*
1	*
2	*
1	*

NORMAL PROBABILITY PLOT



B-15

TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =O3 LEVEL=3

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	1226	SUM WGTS	1226
MEAN	-0.7518	SUM	-921.706
STD DEV	4.12378	VARIANCE	17.0056
SKEWNESS	-0.288528	KURTOSIS	2.70589
USS	21524.8	CSS	20831.8
CV	-548.522	STD MEAN	0.117774
T:MEAN=0	-6.38339	PROB>|T|	0.0001
SGN RANK	-76110	PROB>|S|	0.0001
NUM ^= 0	1184		
D:NORMAL	0.0503377	PROB>D	<.01

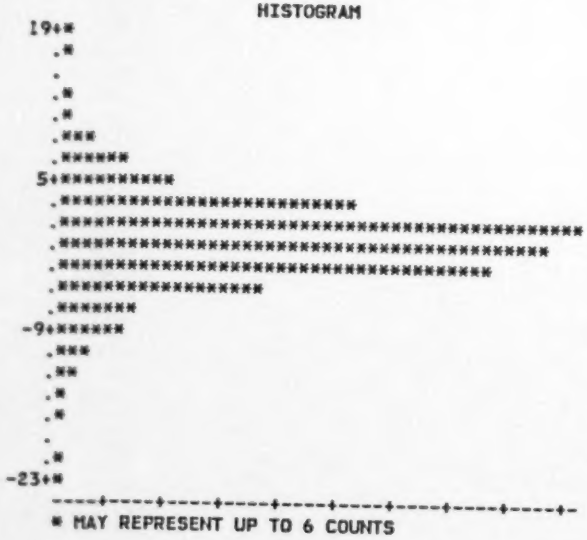
QUANTILES(DEF=4)

100% MAX	19.1136	99%	9.21262
75% Q3	1.71254	95%	5.57907
50% MED	-0.551851	90%	3.84484
25% Q1	-3.0324	10%	-5.22929
0% MIN	-22.1176	5%	-7.61262
		1%	-12.1102
RANGE	41.2312		
Q3-Q1	4.74494		
MODE	0		

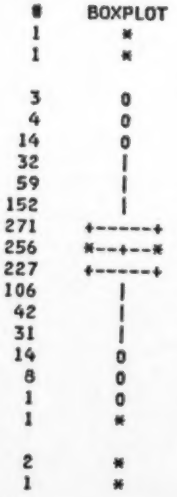
EXTREMES

LOWEST	ID	HIGHEST	ID
-22.1176	(NEW YORK)	12.4396	(SOUTH CA)
-21.1765	(OHIO)	13.2184	(KENTUCKY)
-20.25	(TENNESSE)	13.8958	(FLORIDA)
-17.9551	(FLORIDA)	17.942	(KENTUCKY)
-14.5	(MAINE)	19.1136	(TENNESSE)

HISTOGRAM



BOXPLOT



NORMAL PROBABILITY PLOT

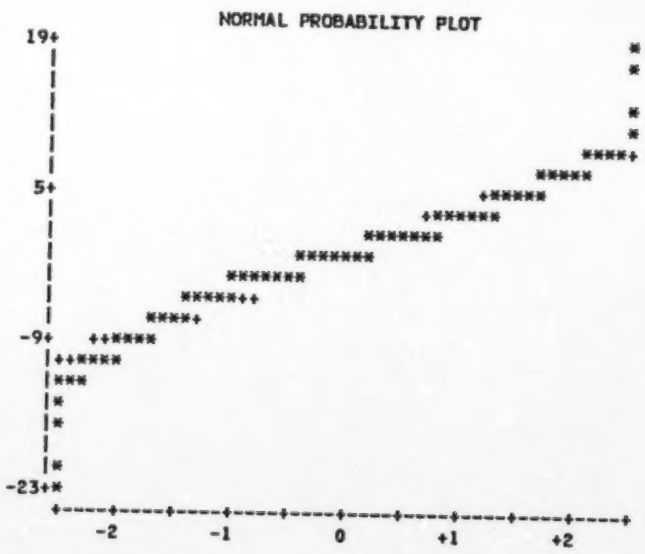


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =O3 LEVEL=4

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	82	SUM WGTS	82
MEAN	-2.31834	SUM	-190.104
STD DEV	2.59993	VARIANCE	6.75962
SKEWNESS	-0.231454	KURTOSIS	2.60149
USS	988.253	CSS	547.529
CV	-112.146	STD MEAN	0.287114
T:MEAN=0	-8.07462	PROB>|T|	0.0001
SGN RANK	-1451	PROB>|S|	0.0001
NUM ^= 0	82		
D:NORMAL	0.088605	PROB>D	0.11

QUANTILES(DEF=4)

100% MAX	6.87117	99%	6.87117
75% Q3	-0.921745	95%	0.957246
50% MED	-2.09452	90%	0.289259
25% Q1	-3.78597	10%	-4.80032
0% MIN	-10.6332	5%	-7.38802
		1%	-10.6332
RANGE	17.5044		
Q3-Q1	2.86423		
MODE	-0.954654		

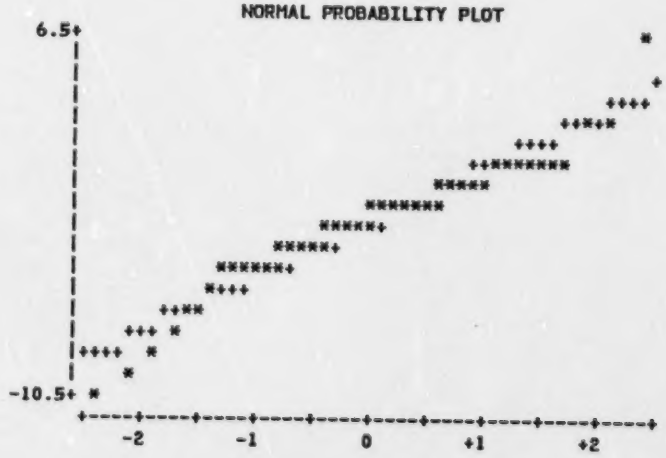
EXTREMES

LOWEST	ID	HIGHEST	ID
-10.6332	(CALIFORN)	0.846433	(CALIFORN)
-9.03756	(CALIFORN)	0.976801	(UTAH)
-8.88078	(CALIFORN)	2.59259	(NEVADA)
-7.47549	(UTAH)	2.99252	(VIRGINIA)
-6.89238	(CALIFORN)	6.87117	(CALIFORN)

```
STEM LEAF                    #
   6 9                       1
   5                         0
   4                         0
   3 0                       1
   2 6                       1
   1 0                       1
   0 11114678                8
  -0 999877641               9
  -1 999666653332211100     18
  -2 97655443322200         14
  -3 98887744310            11
  -4 88776332100            11
  -5 6                       1
  -6 93                      2
  -7 5                       1
  -8 9                       1
  -9 0                       1
 -10 6                       1
    ----+----+----+----+
```

BOXPLOT

NORMAL PROBABILITY PLOT



8-21

TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =PB LEVEL=1

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	600	SUM WGTS	600
MEAN	-0.426697	SUM	-256.018
STD DEV	6.37726	VARIANCE	40.6694
SKEWNESS	-0.117944	KURTOSIS	17.1931
USS	24470.2	CSS	24361
CV	-1494.56	STD MEAN	0.260351
T:MEAN=0	-1.63893	PROB>|T|	0.101752
SGN RANK	-8658	PROB>|S|	0.0238148
NUM ^= 0	560		
D:NORMAL	0.103315	PROB>D	<.01

QUANTILES(DEF=4)

100% MAX	47.5	99%	18.381
75% Q3	2.20675	95%	7.48469
50% MED	-0.136426	90%	5.58685
25% Q1	-3.22149	10%	-6.25
0% MIN	-41.6667	5%	-8.33333
		1%	-14.4287
RANGE	89.1667		
Q3-Q1	5.42825		
MODE	0		

EXTREMES

LOWEST	ID	HIGHEST	ID
-41.6667	(VIRGINIA)	18.5	(KANSAS)
-41.6667	(VIRGINIA)	23.3333	(MISSISSI)
-36.9792	(VIRGINIA)	25.5	(KANSAS)
-36.9792	(VIRGINIA)	41.5	(TEXAS)
-21.4286	(FLORIDA)	47.5	(FLORIDA)

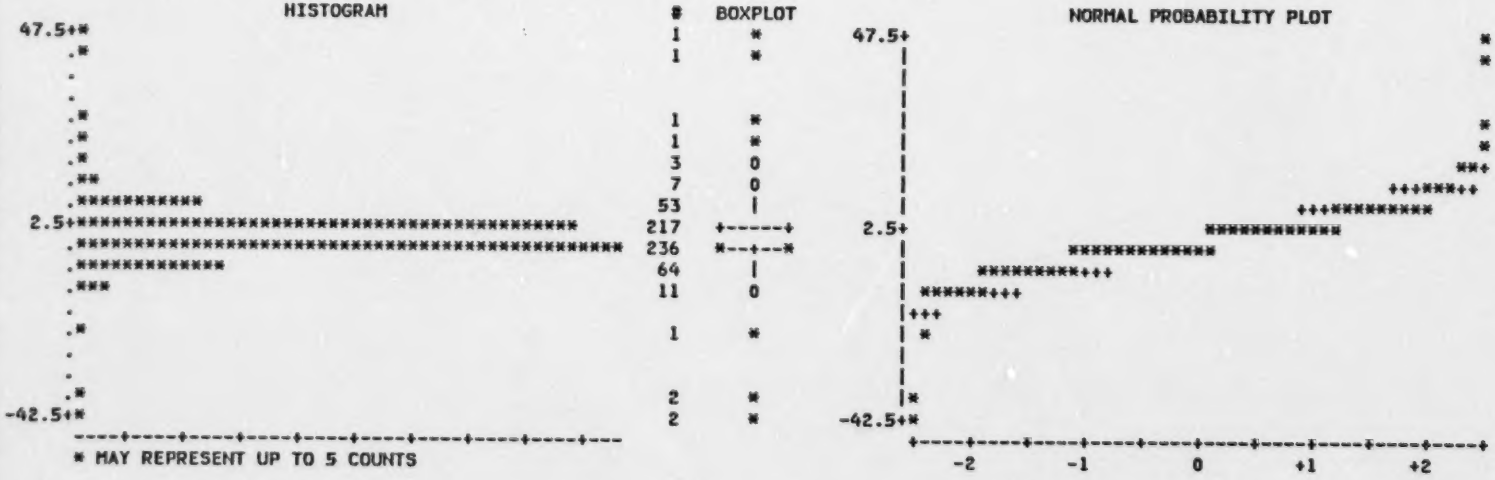


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =PB LEVEL=2

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	575	SUM WGTS	575
MEAN	-1.03827	SUM	-597.007
STD DEV	4.70092	VARIANCE	22.0986
SKEWNESS	0.251584	KURTOSIS	5.25505
USS	13304.5	CSS	12684.6
CV	-452.763	STD MEAN	0.196042
T:MEAN=0	-5.29618	PROB>|T|	0.0001
SGN RANK	-24306	PROB>|S|	0.0001
NUM ~= 0	554		
D:NORMAL	0.0935745	PROB>D	<.01

QUANTILES(DEF=4)

100% MAX	26	99%	11.959
75% Q3	1.1259	95%	7.05183
50% MED	-0.952381	90%	3.5
25% Q1	-3.25203	10%	-6
0% MIN	-20.2	5%	-8.39695
		1%	-16.6972
RANGE	46.2		
Q3-Q1	4.37793		
MODE	0		

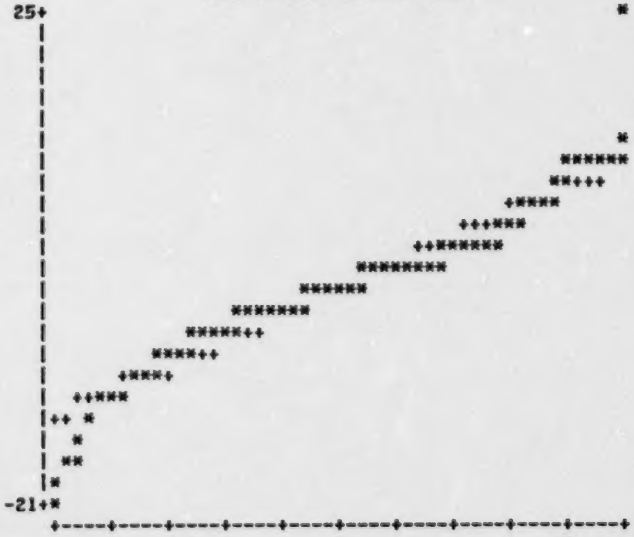
EXTREMES

LOWEST	ID	HIGHEST	ID
-20.2	(FLORIDA)	11.959	(INDIANA)
-19.9564	(VIRGINIA)	11.959	(INDIANA)
-19.9564	(VIRGINIA)	12.2	(FLORIDA)
-18.4406	(VIRGINIA)	25.4667	(NEW HAMP)
-16.7939	(DELAWARE)	26	(NEW HAMP)

HISTOGRAM

#	BOXPLOT
2	*
1	0
9	0
5	0
15	0
17	|
51	|
137	+-----+
120	*--+--*
108	+-----+
54	|
23	|
15	|
9	0
2	0
1	0
2	*
3	*
1	*

NORMAL PROBABILITY PLOT



B-23

TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =PB_FLOW LEVEL=2

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	55	SUM WGTS	55
MEAN	4.58997	SUM	252.448
STD DEV	14.5048	VARIANCE	210.389
SKEWNESS	2.57682	KURTOSIS	6.30374
USS	12519.8	CSS	11361
CV	316.011	STD MEAN	1.95583
T:MEAN=0	2.34682	PROB>|T|	0.0226324
SGN RANK	190.5	PROB>|S|	0.101849
NUM ^= 0	54		
D:NORMAL	0.300375	PROB>D	<.01

QUANTILES(DEF=4)

100% MAX	60	99%	60
75% Q3	4.55696	95%	48.017
50% MED	0.497512	90%	21.3125
25% Q1	-1.71885	10%	-4.9895
0% MIN	-15.5556	5%	-6.58425
		1%	-15.5556
RANGE	75.5556		
Q3-Q1	6.27581		
MODE	-1.24224		

EXTREMES

LOWEST	ID	HIGHEST	ID
-15.5556	(OHIO)	39.1304	(TEXAS)
-7.08955	(HAWAII)	41.4634	(TEXAS)
-6.45793	(HAWAII)	47.8261	(TEXAS)
-5.62249	(TEXAS)	48.7805	(TEXAS)
-5.33088	(HAWAII)	60	(TEXAS)

```
STEM LEAF                     #
   6 0                        1
   5                          1
   5
   4 89                       2
   4 1                        1
   3 9                        1
   3
   2
   2
   1
   1
   0 555777789                9
   0 1111122333344           13
  -0 333322222111100000000   21
  -0 766555                   6
  -1                          1
  -1 6                        1
     ----+----+----+----+-
  MULTIPLY STEM.LEAF BY 10**+01
```

BOXPLOT

NORMAL PROBABILITY PLOT

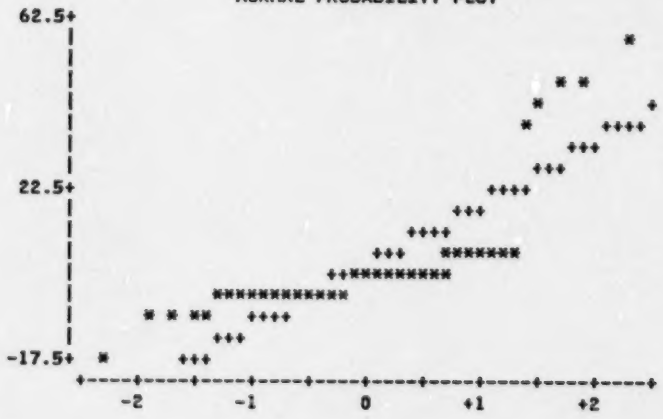


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =PM10 LEVEL=2

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	445	SUM WGTS	445
MEAN	0.109533	SUM	48.7421
STD DEV	5.74906	VARIANCE	33.0516
SKEWNESS	1.27154	KURTOSIS	6.88627
USS	14680.3	CSS	14674.9
CV	5248.7	STD MEAN	0.272531
T:MEAN=0	0.401909	PROB>|T|	0.687944
SGN RANK	-1106	PROB>|S|	0.676637
NUM ^= 0	438		
D:NORMAL	0.0986016	PROB>D	<.01

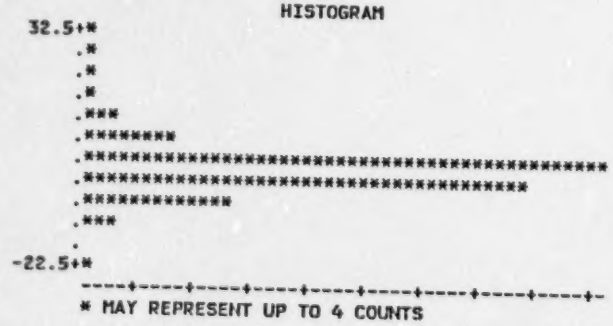
QUANTILES(DEF=4)

100% MAX	33.7432	99%	22.8211
75% Q3	2.68307	95%	9.60413
50% MED	0	90%	5.18755
25% Q1	-3.16135	10%	-6.22827
0% MIN	-21.5038	5%	-8.10338
		1%	-14.0164
RANGE	55.2469		
Q3-Q1	5.84442		
MODE	0		

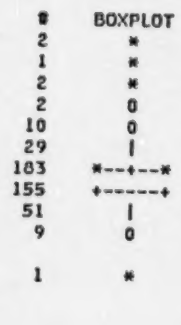
EXTREMES

LOWEST	ID	HIGHEST	ID
-21.5038	(HAWAII)	21.5359	(HAWAII)
-14.9068	(OHIO)	23.9159	(COLORADO)
-14.7514	(PUERTO R)	26.6943	(COLORADO)
-14.1232	(MAINE)	33.6792	(KANSAS)
-13.891	(NEBRASKA)	33.7432	(KENTUCKY)

HISTOGRAM



BOXPLOT



NORMAL PROBABILITY PLOT

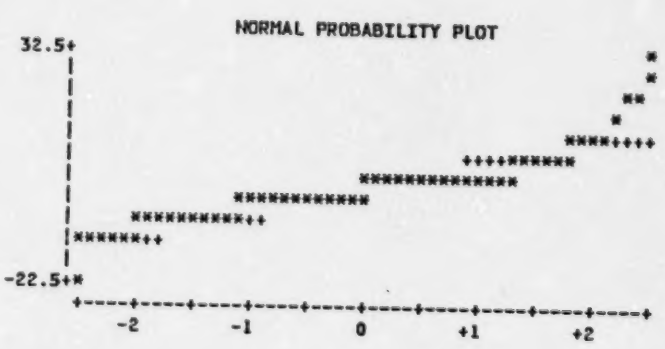


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =SO2 LEVEL=1

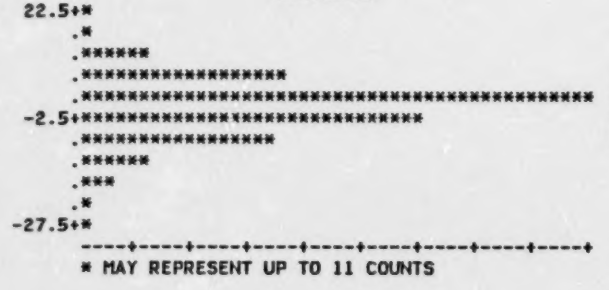
UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	1353	SUM WGTS	1353	100% MAX	25	99%	15	LOWEST ID	HIGHEST ID
MEAN	-0.22262	SUM	-301.205	75% Q3	3.84615	95%	10.0393	-29.3333(FLORIDA)	20(SOUTH CA)
STD DEV	6.66127	VARIANCE	44.3725	50% MED	0	90%	7.75225	-27.2727(TEXAS)	20.0573(SOUTH CA)
SKEWNESS	-0.282445	KURTOSIS	1.06237	25% Q1	-3.94737	10%	-8.58986	-24.1379(ILLINOIS)	21.4286(MISSOURI)
USS	60058.6	CSS	59991.6	0% MIN	-29.3333	5%	-11.8895	-24(OHIO)	23.3766(NEW YORK)
CV	-2992.21	STD MEAN	0.181096			1%	-17.7682	-23.1884(OHIO)	25(INDIANA)
T:MEAN=0	-1.2293	PROB>|T|	0.219174	RANGE	54.3333				
SGN RANK	-5894.5	PROB>|S|	0.628249	Q3-Q1	7.79352				
NUM ^= 0	1211			MODE	0				
D:NORMAL	0.0683934	PROB>D	<.01						

HISTOGRAM



#	BOXPLOT
4	0
7	0
56	|
197	|
487	*-----*
328	+--+--+
182	|
58	|
26	0
6	0
2	0

NORMAL PROBABILITY PLOT

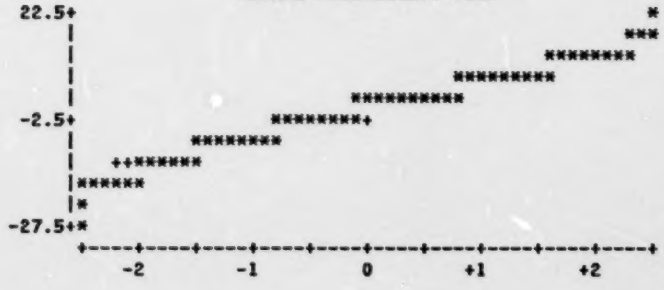


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =SO2 LEVEL=2

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	1183	SUM WGTS	1183
MEAN	-0.243288	SUM	-287.81
STD DEV	5.87627	VARIANCE	34.5305
SKEWNESS	-0.460749	KURTOSIS	5.74839
USS	40885.1	CSS	40815.1
CV	-2415.35	STD MEAN	0.170848
T:MEAN=0	-1.42401	PROB>|T|	0.154709
SGN RANK	-17256.5	PROB>|S|	0.110997
NUM ^= 0	1120		
D:NORMAL	0.0379931	PROB>D	<.01

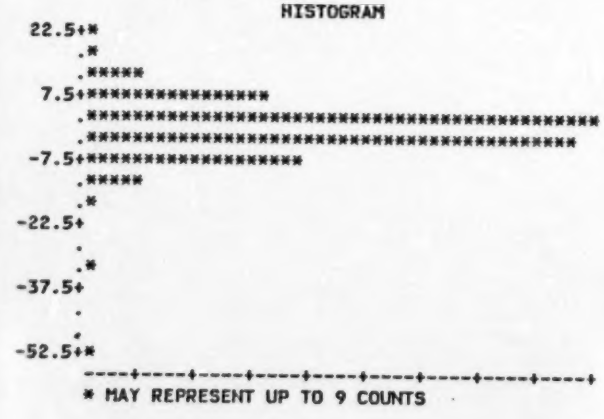
QUANTILES(DEF=4)

100% MAX	23.0769	99%	13.8708
75% Q3	3.31492	95%	9.27239
50% MED	-0.426439	90%	6.97674
25% Q1	-3.88889	10%	-7.26257
0% MIN	-51.7045	5%	-9.3282
		1%	-13.8084
RANGE	74.7815		
Q3-Q1	7.2038		
MODE	0		

EXTREMES

LOWEST	ID	HIGHEST	ID
-51.7045	(CONNECTI)	18.8571	(INDIANA)
-30.8989	(FLORIDA)	21.0811	(FLORIDA)
-18.75	(PENNSYLV)	21.0811	(FLORIDA)
-15.9341	(NEW YORK)	22.4044	(MISSOURI)
-15.6757	(TEXAS)	23.0769	(INDIANA)

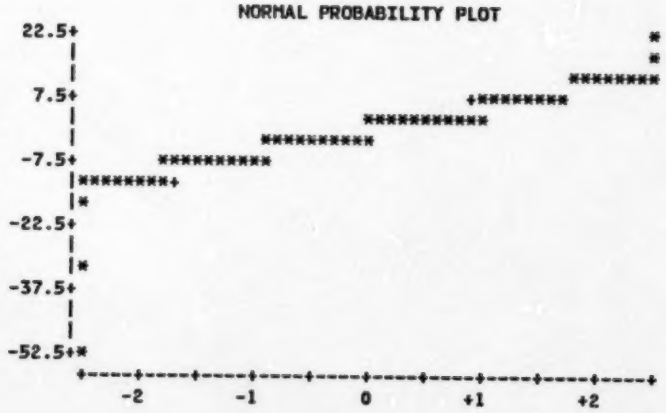
HISTOGRAM



* MAY REPRESENT UP TO 9 COUNTS

#	BOXPLOT
4	0
3	0
39	0
141	|
403	+-----+
381	*--+--*
166	|
39	0
5	0
1	*
1	*

NORMAL PROBABILITY PLOT



B-21

TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =SO2 LEVEL=3

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	1188	SUM WGTS	1188
MEAN	-0.353475	SUM	-419.928
STD DEV	5.64971	VARIANCE	31.9193
SKEWNESS	0.185451	KURTOSIS	1.26428
USS	38036.6	CSS	37888.2
CV	-1598.33	STD MEAN	0.163915
T:MEAN=0	-2.15646	PROB>|T|	0.0312484
SGN RANK	-30781.5	PROB>|S|	0.00615259
NUM ^= 0	1148		
D:NORMAL	0.03818	PROB>D	<.01

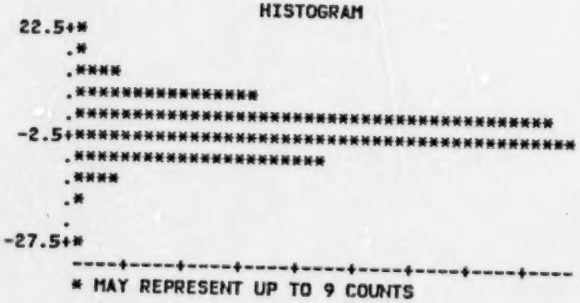
QUANTILES(DEF=4)

100% MAX	24.4565	99%	13.3474
75% Q3	3.16414	95%	9.00261
50% MED	-0.479059	90%	6.64382
25% Q1	-3.93186	10%	-7.34628
0% MIN	-29.661	5%	-9.24808
		1%	-13.3061
RANGE	54.1175		
Q3-Q1	7.09601		
MODE	0		

EXTREMES

LOWEST ID	HIGHEST ID
-29.661(FLORIDA)	17.7596(INDIANA)
-16.055(TEXAS)	20.765(FLORIDA)
-15.555(NORTH CA)	22.2812(NEW YORK)
-15.5172(OHIO)	23.5294(FLORIDA)
-15.1832(ILLINOIS)	24.4565(FLORIDA)

HISTOGRAM



#	BOXPLOT
4	0
4	0
35	0
141	|
375	+-----+
395	*--+--*
192	|
36	0
5	0
1	*

NORMAL PROBABILITY PLOT

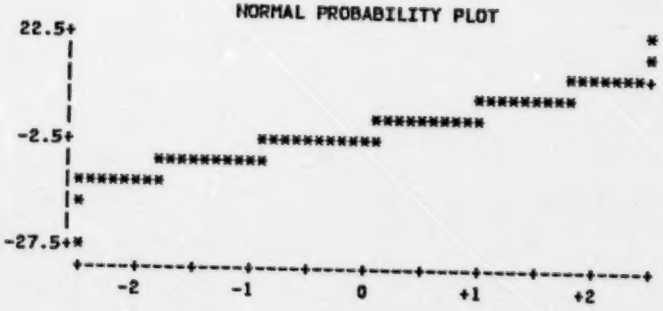


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =SO2 LEVEL=4

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	105	SUM WGTS	105
MEAN	1.39763	SUM	146.751
STD DEV	5.793	VARIANCE	33.5589
SKEWNESS	-0.184888	KURTOSIS	0.739269
USS	3695.22	CSS	3490.12
CV	414.488	STD MEAN	0.565339
T:MEAN=0	2.4722	PROB>|T|	0.0150504
SGN RANK	760.5	PROB>|S|	0.0151162
NUM ^= 0	105		
D:NORMAL	0.0612338	PROB>D	>.15

QUANTILES(DEF=4)

100% MAX	15.6511	99%	15.5692
75% Q3	5.36353	95%	10.8914
50% MED	0.958084	90%	9.23178
25% Q1	-2.20159	10%	-4.93659
0% MIN	-17.2455	5%	-8.1375
		1%	-17.0669
RANGE	32.8966		
Q3-Q1	7.56512		
MODE	-3.125		

EXTREMES

LOWEST	ID	HIGHEST	ID
-17.2455	(TEXAS)	11.0723	(ILLINOIS)
-14.2689	(TENNESSE)	11.25	(CALIFORN)
-12.0048	(TENNESSE)	13.75	(CALIFORN)
-9.125	(INDIANA)	14.2857	(WASHINGT)
-8.625	(INDIANA)	15.6511	(TENNESSE)

```
STEM LEAF                            #
  14 37                              2
  12 7                               1
  10 003513                          6
   8 22697                           5
   6 11134568                        8
   4 688244568                       9
   2 00345789025689                 14
   0 22234556789900123568           20
  -0 6333118541                     10
  -2 8774211119831000               16
  -4 837211                          6
  -6 050                             3
  -8 16                              2
 -10                                 0
 -12 0                               1
 -14 3                               1
 -16 2                               1
    ----+----+----+----+
```

BOXPLOT

NORMAL PROBABILITY PLOT

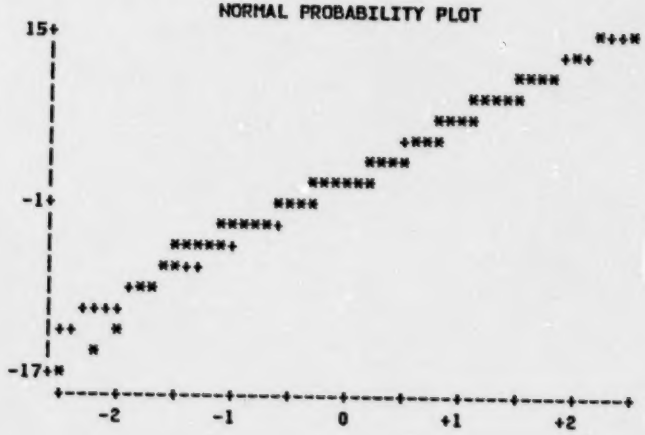


TABLE B-2. SUMMARY STATISTICS FOR 1987 PARS ACCURACY DATA

POLLUTANT =TSP LEVEL=2

UNIVARIATE

VARIABLE=PDIFF PERCENT DIFFERENCE

MOMENTS

N	3963	SUM WGTS	3963
MEAN	0.118268	SUM	468.698
STD DEV	3.88091	VARIANCE	15.0615
SKEWNESS	0.222636	KURTOSIS	4.94597
USS	59728.9	CSS	59673.5
CV	3281.44	STD MEAN	0.0616483
T:MEAN=0	1.91844	PROB>|T|	0.0551276
SGN RANK	62154.5	PROB>|S|	0.356593
NUM ^= 0	3792		
D:NORMAL	0.058663	PROB>D	<.01

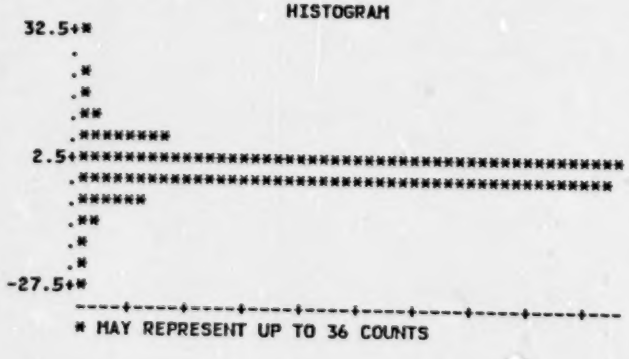
QUANTILES(DEF=4)

100% MAX	33.5289	99%	11.1758
75% Q3	2.12766	95%	6.35831
50% MED	0	90%	4.60301
25% Q1	-2.03443	10%	-4.02325
0% MIN	-29.982	5%	-5.56439
		1%	-10.3358
RANGE	63.511		
Q3-Q1	4.16209		
MODE	0		

EXTREMES

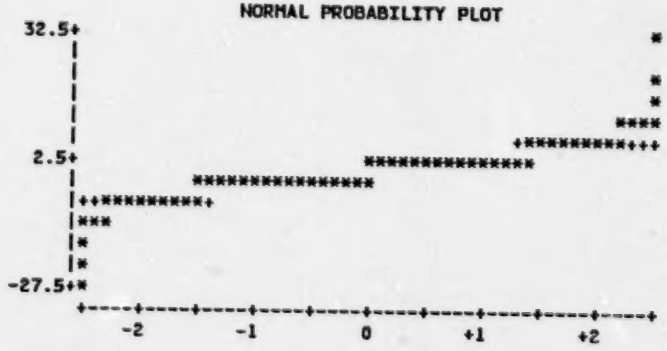
LOWEST	ID	HIGHEST	ID
-29.982	(IDAHO)	18.0203	(ALABAMA)
-24.2038	(DELAWARE)	18.6767	(COLORADO)
-23.5039	(NEBRASKA)	20.8995	(MARYLAND)
-16.1369	(OREGON)	22.7811	(COLORADO)
-15.1263	(VIRGINIA)	33.5289	(COLORADO)

HISTOGRAM



#	BOXPLOT
1	*
2	*
9	*
39	0
278	0
1720	*--+--*
1666	+-----+
203	0
39	0
3	*
2	*
1	*

NORMAL PROBABILITY PLOT



APPENDIX C

PROBABILITY LIMITS FOR PRECISION DATA

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENEOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTER

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	CT	1	3	32	-2.1630	4.2626	-10.518	6.1917	-2.8705	27	*
1	CT	1	4	35	-0.1722	3.9549	-7.924	7.5794	-0.2576	30	
1	NH	1	3	50	-4.1707	3.7405	-11.502	3.1608	-7.8842	48	*
1	RI	1	4	26	1.9893	2.5398	-2.989	6.9673	3.9937	24	*
2	NJ	1	1	81	0.3805	3.0296	-5.558	6.3186	1.1305	68	
3	MD	1	1	68	-0.1357	1.5564	-3.186	2.9149	-0.7190	62	
3	MD	1	4	69	0.3297	1.7571	-3.114	3.7736	1.5587	63	
3	PA	2	2	39	-2.7405	2.8658	-8.357	2.8764	-5.9720	37	*
3	PA	3	1	36	-0.3742	4.6408	-9.470	8.7219	-0.4837	30	
3	PA	3	4	38	-1.1043	4.9369	-10.781	8.5720	-1.3789	32	
3	VA	1	1	47	1.7796	2.3366	-2.800	6.3592	5.2214	40	*
3	VA	1	4	49	0.5424	1.6253	-2.643	3.7280	2.3360	42	*
3	VA	3	1	20	0.3887	1.9823	-3.497	4.2741	0.8768	16	
3	VA	3	3	17	-1.0374	1.9097	-4.780	2.7056	-2.2398	13	*
3	VA	3	4	16	-1.8885	1.5426	-4.912	1.1351	-4.8968	12	*
3	WV	1	1	11	0.4762	9.3941	-17.936	18.8887	0.1681	9	
3	WV	1	2	10	-3.7964	7.2997	-18.104	10.5111	-1.6446	8	
3	WV	1	3	11	-1.0157	9.1008	-18.853	16.8218	-0.3702	9	
3	WV	1	4	10	-2.8729	5.9286	-14.493	8.7471	-1.5324	8	
3	WV	2	1	20	-2.4274	5.6532	-13.508	8.6529	-1.9202	18	
3	WV	2	2	17	-5.8140	4.3249	-14.291	2.6628	-5.5428	15	*
3	WV	2	4	18	-3.2260	2.6737	-8.466	2.0144	-5.1191	16	*
4	AL	12	3	30	0.4074	3.9845	-7.402	8.2171	0.5600	25	
4	AL	12	4	25	-0.3111	6.6053	-13.257	12.6352	-0.2355	20	
4	FL	12	2	31	0.1127	3.9306	-7.591	7.8167	0.1597	27	
4	FL	13	1	19	-0.8896	2.4716	-5.734	3.9547	-1.5689	16	
4	FL	13	3	20	-1.2651	1.9598	-5.106	2.5760	-2.8869	17	*
4	KY	1	1	37	2.0719	2.4565	-2.743	6.8867	5.1304	31	*
4	KY	2	2	15	-2.6850	3.3424	-9.236	3.8662	-3.1112	12	*
4	KY	2	3	18	-2.3076	1.9830	-6.194	1.5791	-4.9371	15	*
4	KY	2	4	14	-2.8228	1.9740	-6.692	1.0463	-5.3505	11	*
4	NC	1	1	26	1.9045	3.5142	-4.983	8.7922	2.7634	21	*
4	NC	1	2	21	3.6524	3.3245	-2.864	10.1684	5.0347	18	*
4	NC	1	3	24	0.2475	10.9101	-21.136	21.6314	0.1111	21	
4	NC	2	1	19	-3.5621	4.7617	-12.895	5.7709	-3.2608	17	*
4	NC	2	3	25	0.3556	2.8431	-5.217	5.9280	0.6253	23	
4	NC	2	4	24	-0.4156	2.9988	-6.293	5.4620	-0.6790	22	
4	NC	3	1	24	-2.7034	2.6860	-7.968	2.5611	-4.9308	20	*
4	NC	3	2	26	-0.9244	2.6235	-6.067	4.2178	-1.7966	22	
4	NC	3	3	27	-1.1763	2.6463	-6.363	4.0105	-2.3097	23	*
4	SC	1	4	12	2.3265	4.0123	-5.538	10.1905	2.0086	10	
4	TN	2	2	31	1.0979	2.2895	-3.389	5.5852	2.6700	26	*
4	TN	3	1	18	-2.0744	1.1631	-4.354	0.2053	-7.5669	15	*
4	TN	3	3	18	-1.9528	1.8028	-5.486	1.5807	-4.5956	15	*
4	TN	3	4	18	-1.8769	1.5892	-4.992	1.2378	-5.0109	15	*
5	IL	1	2	72	0.0981	4.7365	-9.185	9.3816	0.1758	65	
5	IL	3	1	32	-0.5064	3.3336	-7.040	6.0274	-0.8593	29	
5	IL	3	2	23	-1.0124	3.1365	-7.160	5.1351	-1.5481	20	
5	IL	3	4	43	0.6690	3.6426	-6.470	7.8085	1.2043	39	
5	IN	1	1	15	-1.7031	4.4294	-10.385	6.9786	-1.4892	12	
5	IN	1	2	16	-5.4860	4.4783	-14.264	3.2915	-4.9000	13	*
5	IN	1	3	18	0.2064	5.2793	-10.141	10.5538	0.1659	15	
5	IN	8	3	20	-0.4673	1.3687	-3.150	2.2153	-1.5269	17	

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
5	IN	8	4	19	-0.7755	1.59527	-3.902	2.3512	-2.1190	16	
5	IN	100	1	13	0.3086	2.50589	-4.603	5.2201	0.4440	11	
5	IN	100	2	11	3.1253	8.50566	-13.546	19.7964	1.2186	9	
5	IN	100	3	13	2.9787	3.40864	-3.702	9.6596	3.1508	11	*
5	MI	1	1	37	0.1757	2.08169	-3.904	4.2559	0.5135	32	
5	MI	1	2	39	0.0449	2.39419	-4.648	4.7375	0.1171	34	
5	MI	2	1	29	0.8388	4.12278	-7.242	8.9195	1.0957	24	
5	MI	2	3	24	-3.7784	5.43958	-14.440	6.8832	-3.4029	19	*
5	MI	2	4	29	-0.8941	3.50097	-7.756	5.9678	-1.3753	24	
5	OH	1	3	19	-0.9023	3.87441	-8.496	6.6916	-1.0151	16	
5	OH	6	1	12	-0.2218	4.77639	-9.584	9.1399	-0.1609	10	
5	OH	6	2	16	-0.0126	4.89755	-9.612	9.5866	-0.0103	14	
5	OH	6	3	12	-1.2108	3.32188	-7.722	5.3000	-1.2627	10	
5	OH	6	4	11	0.0080	2.27086	-4.443	4.4589	0.0118	9	
5	OH	8	1	46	0.9886	1.86970	-2.676	4.6532	3.5860	43	*
5	OH	9	1	13	2.4359	3.25423	-3.942	8.8142	2.6989	11	*
5	OH	9	2	12	2.8148	1.81784	-0.748	6.3778	5.3640	10	*
5	OH	9	3	19	4.2105	2.24698	-0.194	8.6146	8.1680	17	*
5	OH	9	4	19	3.0191	2.83145	-2.531	8.5687	4.6478	17	*
5	OH	10	1	12	-1.1515	4.31828	-9.615	7.3123	-0.9238	10	
5	OH	10	2	12	-0.1204	2.87473	-5.755	5.5141	-0.1450	10	
5	OH	10	3	12	-1.3922	1.60296	-4.534	1.7496	-3.0086	10	*
5	OH	10	4	14	0.6698	3.15844	-5.521	6.8604	0.7935	12	
5	WI	1	2	46	0.1404	4.71725	-9.105	9.3862	0.2018	39	
5	WI	1	3	47	0.0152	3.43673	-6.721	6.7512	0.0304	40	
6	LA	1	4	20	1.2908	3.33119	-5.238	7.8199	1.7329	17	
6	NM	1	1	14	5.8121	2.92626	0.077	11.5475	7.4316	12	*
6	NM	1	2	12	4.4858	3.07965	-1.550	10.5219	5.0457	10	*
6	NM	1	3	6	-4.6759	3.05701	-10.668	1.3159	-3.7466	2	
6	NM	2	3	9	-5.4489	3.76930	-12.837	1.9389	-4.3368	4	*
6	OK	101	1	12	-1.8367	2.06789	-5.890	2.2164	-3.0768	10	*
6	OK	101	2	13	-1.1534	2.91173	-6.860	4.5536	-1.4282	11	
6	OK	101	3	11	-0.4163	1.14778	-2.666	1.8334	-1.2028	9	
6	TX	2	1	23	-0.3145	3.44414	-7.065	6.4360	-0.4379	20	
6	TX	2	2	21	-0.7764	4.65817	-9.906	8.3536	-0.7638	18	
6	TX	2	3	22	-0.1088	3.73531	-7.430	7.2124	-0.1367	19	
6	TX	6	2	17	-1.2264	2.09812	-5.339	2.8859	-2.4101	14	*
6	TX	6	3	19	-3.5482	3.42471	-10.261	3.1642	-4.5161	16	*
7	IA	1	2	31	-1.6071	2.85210	-7.197	3.9830	-3.1373	28	*
7	MO	2	1	31	-0.5300	2.95141	-6.315	5.2548	-0.9998	26	
7	MO	2	2	32	2.3796	2.07352	-1.684	6.4437	6.4919	27	*
7	MO	3	1	17	5.3968	7.39374	-9.095	19.8885	3.0095	15	*
7	MO	3	3	14	5.3320	3.32725	-1.189	11.8534	5.9961	12	*
7	MO	3	4	14	5.5483	5.66685	-5.559	16.6554	3.6634	12	*
7	MO	4	1	20	1.2644	3.46411	-5.525	8.0541	1.6324	17	
7	MO	4	2	18	0.0731	3.03028	-5.866	6.0124	0.1023	15	
7	MO	4	3	20	0.4530	2.08367	-3.631	4.5370	0.9724	17	
7	MO	4	4	19	2.9119	4.71968	-6.339	12.1625	2.6893	16	*
7	NE	2	1	11	1.4436	1.62066	-1.733	4.6201	2.9543	9	*
7	NE	2	2	9	2.9202	2.10601	-1.208	7.0480	4.1599	7	*
7	NE	2	4	10	1.9231	0.75546	0.442	3.4038	8.0498	8	*
7	NE	3	1	9	0.1302	1.42050	-2.654	2.9144	0.2749	7	
7	NE	3	2	11	0.1889	1.84024	-3.418	3.7957	0.3404	9	

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
7	NE	3	4	12	-2.3674	1.04967	-4.425	-0.3100	-7.8127	10	*
8	CO	1	2	69	0.4675	4.26436	-7.891	8.8257	0.9107	57	
8	CO	1	4	69	3.1875	5.21359	-7.031	13.4061	5.0785	56	*
9	AZ	200	1	22	-1.8412	4.01189	-9.704	6.0222	-2.1525	15	*
9	AZ	200	2	26	-0.5997	2.31307	-5.133	3.9339	-1.3219	17	
9	AZ	200	3	41	-0.3147	3.42209	-7.022	6.3926	-0.5889	32	
9	AZ	300	2	16	0.3536	2.35954	-4.271	4.9783	0.5995	13	
9	AZ	300	4	11	0.2110	1.50951	-2.748	3.1697	0.4637	9	
9	CA	36	2	49	-1.9891	4.11528	-10.055	6.0768	-3.3835	42	*
9	CA	36	4	48	-2.0043	3.99019	-9.825	5.8165	-3.4801	41	*
9	NV	300	1	16	-0.5718	3.19078	-6.826	5.6821	-0.7168	14	
10	ID	1	2	17	0.2057	1.52969	-2.792	3.2039	0.5545	15	

POLLUTANT =NO2

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	CT	1	3	18	-2.9441	5.50601	-13.736	7.8477	-2.2686	15	*
1	CT	1	4	16	0.4558	3.24097	-5.897	6.8081	0.5625	13	
1	MA	1	1	35	1.1728	7.32045	-13.175	15.5208	0.9478	29	
1	MA	1	2	40	-3.6652	6.42696	-16.262	8.9317	-3.6068	34	*
2	NJ	1	1	51	2.6283	4.22686	-5.656	10.9130	4.4406	43	*
2	NJ	1	2	52	0.1422	4.90927	-9.480	9.7644	0.2089	44	
2	NJ	1	3	53	0.0343	6.09321	-11.908	11.9770	0.0410	45	
2	NY	1	1	15	1.2302	4.15305	-6.910	9.3702	1.1473	10	
2	NY	1	2	31	1.2182	4.84003	-8.268	10.7046	1.4013	25	
3	DE	1	1	15	2.4815	3.91908	-5.200	10.1629	2.4523	13	*
3	DE	1	3	17	1.6519	6.27121	-10.640	13.9434	1.0860	15	
3	DE	1	4	24	1.4087	4.58554	-7.579	10.3963	1.5049	22	
3	MD	1	2	21	-0.3001	3.92755	-7.998	7.3979	-0.3501	18	
3	MD	1	3	15	-1.5186	5.60086	-12.496	9.4591	-1.0501	12	
3	MD	1	4	23	0.3158	2.64292	-4.864	5.4960	0.5731	21	
3	PA	2	1	27	1.5939	5.52037	-9.226	12.4138	1.5002	25	
3	PA	2	2	25	0.2539	6.49508	-12.476	12.9842	0.1955	23	
3	PA	2	3	24	-1.5859	7.15556	-15.611	12.4390	-1.0857	22	
3	PA	2	4	27	-1.4546	7.03242	-15.238	12.3289	-1.0748	25	
3	PA	3	1	16	-1.4534	4.03030	-9.353	6.4460	-1.4425	13	
3	PA	3	2	13	-1.7791	5.49683	-12.553	8.9946	-1.1670	10	
3	PA	3	3	16	-3.8420	7.17060	-17.896	10.2123	-2.1432	13	
3	PA	3	4	19	-2.0919	2.52469	-7.040	2.8565	-3.6117	16	*
3	VA	1	1	30	0.0184	3.40234	-6.650	6.6870	0.0296	26	
3	VA	1	2	28	-0.0165	4.14888	-8.148	8.1153	-0.0211	24	
3	VA	1	3	29	-0.8511	3.71751	-8.137	6.4353	-1.2328	25	
3	VA	1	4	29	-2.4869	5.63516	-13.532	8.5580	-2.3766	25	*
3	VA	3	2	10	0.5771	6.01470	-11.212	12.3659	0.3034	7	
3	VA	3	4	13	-1.7482	8.66178	-18.725	15.2289	-0.7277	10	
3	WV	1	1	16	-2.1436	6.22865	-14.352	10.0645	-1.3766	13	
3	WV	1	2	17	-0.1847	6.34262	-12.616	12.2469	-0.1200	14	
3	WV	1	3	17	0.6821	4.55917	-8.254	9.6181	0.6168	14	
3	WV	1	4	17	-1.2104	6.98111	-14.893	12.4725	-0.7149	14	
3	WV	2	4	14	1.4903	4.51875	-7.366	10.3471	1.2340	12	

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =NO2

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
4	FL	12	4	5	7.7467	5.5478	-3.127	18.6203	3.1224	3	
4	FL	18	2	16	0.5776	4.9011	-9.029	10.1837	0.4714	14	
4	FL	18	4	8	7.5992	7.3208	-6.750	21.9479	2.9360	6	*
4	GA	10	3	22	-2.0133	6.5124	-14.777	10.7510	-1.4500	20	
4	GA	10	4	26	0.2548	4.6376	-8.835	9.3445	0.2801	24	
4	KY	1	1	29	-1.3936	6.3314	-13.803	11.0160	-1.1853	24	
4	KY	1	2	34	-1.9450	9.3601	-20.291	16.4008	-1.2116	29	
4	NC	2	1	18	0.2877	3.9124	-7.381	7.9559	0.3120	16	
4	NC	2	4	26	-1.0948	3.5441	-8.041	5.8516	-1.5752	24	
5	IL	1	2	32	-2.2377	4.7357	-11.520	7.0441	-2.6730	28	*
5	IL	1	3	40	-3.1618	5.2507	-13.453	7.1295	-3.8084	36	*
5	IL	3	1	43	0.2230	3.9643	-7.547	7.9931	0.3689	38	
5	IL	3	2	39	-0.7937	2.8074	-6.296	4.7087	-1.7656	34	
5	IN	1	1	8	3.8650	6.4056	-8.690	16.4200	1.7066	6	
5	IN	1	2	14	1.1025	5.6157	-9.904	12.1093	0.7346	11	
5	IN	1	3	15	-7.3827	6.8169	-20.744	5.9785	-4.1944	12	*
5	IN	1	4	11	-3.0092	3.3595	-9.594	3.5755	-2.9708	9	*
5	OH	8	2	24	-2.9825	4.4855	-11.774	5.8091	-3.2574	22	*
5	OH	8	3	25	3.8979	3.9793	-3.902	11.6973	4.8977	23	*
5	OH	9	1	19	-2.9856	2.8941	-8.658	2.6869	-4.4967	17	*
5	OH	9	2	9	-0.8698	5.7923	-12.223	10.4830	-0.4505	7	
5	OH	9	3	13	0.9877	7.1958	-13.116	15.0915	0.4949	11	
5	WI	1	2	13	-2.9733	2.2980	-7.477	1.5308	-4.6650	11	*
5	WI	1	3	13	-3.1787	4.1237	-11.261	4.9038	-2.7793	11	*
5	WI	1	4	14	-0.6835	2.8408	-6.251	4.8845	-0.9002	12	
6	LA	1	2	27	-2.6133	4.8524	-12.124	6.8974	-2.7984	23	*
6	LA	1	3	25	-1.1609	4.4660	-9.914	7.5925	-1.2997	21	
6	LA	1	4	26	-0.0946	3.1493	-6.267	6.0780	-0.1531	22	
6	OK	101	1	17	0.0864	3.5871	-6.944	7.1171	0.0993	14	
6	OK	101	2	17	0.8374	1.7615	-2.615	4.2898	1.9601	14	
6	OK	103	1	12	0.8032	3.6938	-6.437	8.0431	0.7532	10	
6	OK	103	2	12	0.6984	3.0413	-5.263	6.6594	0.7955	10	
6	OK	103	3	12	0.5510	5.4050	-10.043	11.1448	0.3531	10	
6	TX	2	1	13	0.4490	6.2129	-11.728	12.6263	0.2606	11	
6	TX	2	2	17	1.4685	6.9357	-12.125	15.0624	0.8730	15	
6	TX	2	3	14	3.2684	5.5518	-7.613	14.1499	2.2027	12	*
6	TX	6	1	20	0.0187	1.2668	-2.464	2.5016	0.0661	17	
6	TX	6	3	19	-0.2456	2.5857	-5.314	4.8223	-0.4141	16	
7	MO	1	1	12	5.5126	5.6543	-5.570	16.5950	3.3773	10	*
7	MO	1	2	12	3.0352	8.7566	-14.128	20.1982	1.2007	10	
7	MO	1	3	12	1.6885	8.0699	-14.128	17.5055	0.7248	10	
7	MO	1	4	12	-0.7035	5.0521	-10.606	9.1987	-0.4824	10	
7	MO	2	2	32	3.0694	4.9809	-6.693	12.8321	3.4860	27	*
7	MO	2	3	32	3.6277	4.1249	-4.457	11.7125	4.9749	27	*
7	MO	3	1	16	-0.7233	5.3022	-11.115	9.6690	-0.5456	14	
7	MO	3	2	14	-1.6924	5.2531	-11.988	8.6037	-1.2055	12	
7	MO	3	3	13	-0.5343	11.2440	-22.572	21.5039	-0.1713	11	
7	MO	3	4	14	-0.3928	3.7029	-7.650	6.8649	-0.3969	12	
7	MO	4	1	11	-1.5663	7.1953	-15.669	12.5365	-0.7220	9	
7	MO	4	2	13	1.5668	7.4073	-12.952	16.0852	0.7626	11	
7	MO	4	3	14	-0.6982	3.9901	-8.519	7.1225	-0.6547	12	
8	CO	1	1	18	5.1689	10.0759	-14.580	24.9177	2.1765	15	*
8	CO	1	3	15	1.3498	17.5236	-32.996	35.6961	0.2983	12	

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =NO2

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
8	CO	1	4	11	1.42210	6.47463	-11.268	14.1124	0.7285	8	
8	UT	1	2	40	-0.48644	2.00304	-4.412	3.4395	-1.5359	37	
9	AZ	300	2	6	3.46494	8.79863	-13.780	20.7103	0.9646	4	
9	CA	36	1	46	0.41924	6.14186	-11.619	12.4573	0.4630	38	
9	CA	36	2	45	-0.49795	4.54639	-9.409	8.4130	-0.7347	38	
9	NV	300	1	16	-0.96654	5.55576	-11.856	9.9227	-0.6959	14	

POLLUTANT =O3

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	MA	1	1	21	-0.3694	4.66914	-9.521	8.7821	-0.3626	18	
1	MA	1	3	82	-2.3228	4.15403	-10.465	5.8191	-5.0634	70	*
1	RI	1	2	24	-5.1025	3.06384	-11.108	0.9026	-8.1587	22	*
1	RI	1	3	31	-3.2590	2.99909	-9.137	2.6192	-6.0503	29	*
1	VT	1	2	19	0.0839	1.76598	-3.377	3.5452	0.2071	17	
1	VT	1	3	19	-0.7625	2.50746	-5.677	4.1521	-1.3256	17	
1	VT	1	4	5	2.1778	2.64792	-3.012	7.3678	1.8391	3	
2	NJ	1	1	75	-0.3260	4.55786	-9.259	8.6074	-0.6194	64	
2	NJ	1	2	104	-1.1164	5.16837	-11.246	9.0136	-2.2029	90	*
2	NJ	1	4	82	0.6688	5.66466	-10.434	11.7716	1.0692	68	
3	DE	1	4	22	1.7585	2.26150	-2.674	6.1910	3.6471	17	*
3	MD	5	2	53	0.4082	2.42439	-4.344	5.1600	1.2258	49	
3	PA	2	2	52	1.5185	4.38303	-7.072	10.1093	2.4983	48	*
3	PA	2	3	54	-0.3049	3.95071	-8.048	7.4385	-0.5670	50	
3	PA	2	4	21	-1.3053	3.70001	-8.557	5.9467	-1.6167	17	
3	PA	3	2	21	1.4653	3.57931	-5.550	8.4807	1.8760	18	
3	PA	3	3	16	5.4264	6.18897	-6.704	17.5568	3.5071	13	*
3	PA	3	4	10	1.0598	6.01464	-10.729	12.8484	0.5572	7	
3	VA	1	1	14	-0.2274	4.28844	-8.633	8.1780	-0.1984	12	
3	VA	3	1	20	-1.7624	2.86365	-7.375	3.8504	-2.7523	16	*
3	VA	3	4	20	-2.3832	3.66520	-9.567	4.8006	-2.9079	16	*
3	VA	815	1	22	0.0316	1.50592	-2.920	2.9832	0.0984	19	
3	VA	815	2	26	0.4265	1.67420	-2.855	3.7079	1.2988	23	
3	VA	815	3	21	-1.8822	2.12904	-6.055	2.2907	-4.0513	18	*
3	VA	815	4	24	-1.8598	3.29813	-8.324	4.6045	-2.7626	21	*
3	WV	1	1	14	-1.7049	4.17240	-9.883	6.4730	-1.5289	11	
3	WV	1	2	24	-0.5000	3.06045	-6.499	5.4984	-0.8004	21	
3	WV	1	3	35	-0.7655	3.88606	-8.382	6.8511	-1.1655	32	
3	WV	1	4	16	-0.0572	5.14594	-10.143	10.0288	-0.0445	13	
4	AL	12	1	6	3.1046	5.47325	-7.623	13.8321	1.3894	3	
4	AL	12	2	17	-0.3981	4.93111	-10.063	9.2669	-0.3329	14	
4	AL	12	3	22	-1.5970	8.19771	-17.665	14.4705	-0.9137	18	
4	AL	12	4	14	-2.1471	8.17874	-18.177	13.8832	-0.9823	10	
4	AL	13	1	4	-4.5000	1.41421	-7.272	-1.7281	-6.3640	2	*
4	AL	13	4	10	-3.5000	3.28634	-9.941	2.9412	-3.3679	8	*
4	FL	1	1	20	-0.4049	2.33778	-4.987	4.1772	-0.7745	17	
4	FL	1	2	26	-1.1768	2.05662	-5.208	2.8542	-2.9177	23	*
4	FL	1	3	18	1.1200	2.00337	-2.807	5.0466	2.3719	15	*
4	FL	1	4	18	1.0494	2.83925	-4.516	6.6143	1.5681	16	
4	FL	11	1	52	-3.6031	5.28497	-13.962	6.7554	-4.9163	49	*

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =03

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
4	FL	11	4	25	-6.4625	4.91482	-16.096	3.1705	-6.5745	23	*
4	FL	12	2	23	0.3671	4.77959	-9.001	9.7351	0.3683	20	
4	FL	12	3	26	2.5848	3.36118	-4.003	9.1727	3.9212	23	*
4	FL	13	2	20	-0.5751	1.10986	-2.750	1.6003	-2.3173	17	*
4	FL	13	3	18	-1.3813	2.34050	-5.969	3.2060	-2.5040	15	*
4	FL	13	4	21	0.2042	1.52269	-2.780	3.1887	0.6146	18	
4	FL	16	1	22	-3.7009	3.45787	-10.478	3.0765	-5.0200	20	*
4	FL	16	2	21	-3.4897	5.78486	-14.828	7.8486	-2.7644	19	*
4	FL	16	3	25	-3.8123	2.57339	-8.856	1.2315	-7.4071	23	*
4	FL	16	4	25	-2.9261	2.02569	-6.896	1.0442	-7.2225	23	*
4	FL	17	1	21	-1.2381	3.03398	-7.185	4.7085	-1.8700	18	
4	FL	17	2	19	-0.5263	1.53982	-3.544	2.4917	-1.4899	16	
4	FL	18	1	13	-0.3336	0.52147	-1.356	0.6885	-2.3068	11	*
4	FL	18	2	15	-2.1870	1.71317	-5.545	1.1708	-4.9441	13	*
4	FL	18	3	15	-2.8070	2.83864	-8.371	2.7567	-3.8298	13	*
4	GA	10	1	18	-0.6157	1.72979	-4.006	2.7747	-1.5102	13	
4	GA	10	2	70	-0.1998	2.26384	-4.637	4.2373	-0.7384	64	
4	KY	2	2	11	0.9076	5.80676	-10.474	12.2888	0.5184	9	
4	KY	2	4	8	-0.8133	7.51280	-15.538	13.9118	-0.3062	6	
4	MS	100	1	9	4.1718	3.24026	-2.179	10.5227	3.8625	7	*
4	MS	100	3	24	-1.0990	4.00459	-8.948	6.7500	-1.3445	22	
4	MS	100	4	23	-1.6093	3.86600	-9.187	5.9681	-1.9963	20	
4	NC	2	4	8	-0.0714	4.84184	-9.561	9.4186	-0.0417	6	
4	NC	3	1	12	-0.6430	3.17925	-6.874	5.5883	-0.7006	10	
4	NC	3	3	14	1.1663	2.60853	-3.946	6.2790	1.6729	12	
4	NC	3	4	12	-3.0013	2.92519	-8.735	2.7321	-3.5542	10	*
4	SC	1	1	38	0.6356	7.71909	-14.494	15.7650	0.5076	32	
4	SC	1	2	32	1.9936	5.18161	-8.162	12.1496	2.1765	27	*
4	SC	1	4	43	-3.2535	5.56313	-14.157	7.6502	-3.8350	36	*
4	TN	1	4	7	0.4303	3.96475	-7.341	8.2012	0.2871	4	
4	TN	2	2	17	1.6755	2.81802	-3.848	7.1988	2.4514	15	*
4	TN	2	3	16	0.4759	2.18444	-3.806	4.7574	0.8715	14	
4	TN	3	1	13	2.1724	3.18812	-4.076	8.4211	2.4568	11	*
4	TN	3	3	12	2.3149	2.11417	-1.829	6.4586	3.7930	10	*
4	TN	3	4	12	0.2057	3.02049	-5.714	6.1259	0.2359	10	
4	TN	5	1	9	-0.6078	1.63475	-3.812	2.5963	-1.1154	7	
4	TN	5	2	10	0.6759	3.83503	-6.841	8.1926	0.5574	8	
4	TN	5	4	9	-1.7300	2.73687	-7.094	3.6343	-1.8963	7	
5	IL	3	1	11	-0.5502	3.30173	-7.022	5.9212	-0.5527	9	
5	IL	3	2	69	-0.1342	2.91680	-5.851	5.5827	-0.3821	60	
5	IL	3	3	82	-1.6331	3.84660	-9.172	5.9062	-3.8446	73	*
5	IL	3	4	35	-1.3577	3.13088	-7.494	4.7788	-2.5655	27	*
5	IN	1	2	40	-2.6602	5.13845	-12.732	7.4112	-3.2742	32	*
5	IN	2	2	12	-2.3210	3.20250	-8.598	3.9559	-2.5106	10	*
5	IN	2	3	12	-0.1589	2.75792	-5.564	5.2466	-0.1996	10	
5	IN	8	2	37	-1.0447	3.30787	-7.528	5.4388	-1.9210	31	
5	IN	8	3	41	-0.5277	3.51715	-7.421	6.3659	-0.9607	35	
5	IN	100	2	9	1.2000	9.74829	-17.907	20.3067	0.3693	6	
5	IN	100	3	18	-0.7003	3.44299	-7.449	6.0480	-0.8629	15	
5	MI	2	1	22	-3.1651	3.21383	-9.464	3.1340	-4.6193	18	*
5	MI	2	2	25	-0.9119	3.34868	-7.475	5.6515	-1.3617	21	
5	MI	2	3	24	-1.4810	3.44879	-8.241	5.2786	-2.1037	20	*
5	MI	2	4	27	-1.4957	2.90852	-7.196	4.2050	-2.6721	23	*

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =03

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
5	MN	1	4	31	0.4043	2.3444	-4.191	4.9994	0.960	28	
5	OH	1	2	20	-0.3846	5.6162	-11.392	10.6231	-0.306	17	
5	OH	1	3	35	0.7363	5.4256	-9.898	11.3704	0.803	32	
5	OH	1	4	9	-1.1609	3.6219	-8.260	5.9382	-0.962	6	
5	OH	2	2	17	-1.1226	6.0539	-12.988	10.7431	-0.765	13	
5	OH	2	3	15	-2.5357	4.8355	-12.013	6.9419	-2.031	11	
5	OH	6	2	12	2.3710	3.8103	-5.097	9.8393	2.156	10	
5	OH	6	3	13	0.5324	1.5474	-2.501	3.5654	1.241	11	
5	OH	9	2	18	0.0470	2.1507	-4.168	4.2624	0.093	15	
5	OH	9	3	23	0.2470	1.9792	-3.632	4.1261	0.598	20	
5	OH	9	4	6	-0.3315	0.8301	-1.958	1.2956	-0.978	4	
5	OH	10	2	25	-0.7632	1.8217	-4.334	2.8073	-2.095	21	*
5	OH	10	3	22	-0.9576	2.5171	-5.891	3.9759	-1.784	18	
5	OH	10	4	11	-0.0304	1.9124	-3.779	3.7179	-0.053	7	
5	OH	12	2	18	-1.4607	12.0957	-25.168	22.2468	-0.512	16	
5	OH	15	2	25	1.5444	10.6197	-19.270	22.3590	0.727	23	
5	OH	15	3	22	4.3664	5.5445	-6.501	15.2336	3.694	20	*
5	WI	1	4	26	-0.9571	2.3258	-5.516	3.6015	-2.098	15	
6	AR	1	1	12	0.0950	6.7934	-13.220	13.4101	0.048	10	
6	AR	1	2	12	-0.4244	3.1540	-6.606	5.7573	-0.466	10	
6	AR	1	3	8	-0.6533	2.5441	-5.640	4.3331	-0.726	6	
6	LA	1	4	97	-1.2012	3.8373	-8.722	6.3199	-3.083	82	*
6	NM	1	2	25	-1.2858	3.7839	-8.702	6.1306	-1.699	21	
6	NM	1	3	17	-0.7810	4.6628	-9.920	8.3581	-0.691	14	
6	NM	2	3	10	-8.7796	4.6611	-17.915	0.3562	-5.956	5	*
6	OK	101	2	18	0.2368	1.6194	-2.937	3.4108	0.620	15	
6	OK	103	2	18	0.2992	2.7193	-5.031	5.6290	0.467	15	
6	OK	103	3	18	-2.9041	2.1096	-7.039	1.2306	-5.841	15	*
6	TX	2	1	35	0.0918	3.9376	-7.626	7.8095	0.138	31	
6	TX	2	2	39	-2.2360	4.2111	-10.490	6.0177	-3.316	34	*
6	TX	2	3	49	0.1008	4.3742	-8.473	8.6743	0.161	45	
6	TX	6	1	39	-4.7960	3.9907	-12.618	3.0257	-7.505	33	*
6	TX	6	2	39	-6.7316	3.9865	-14.545	1.0819	-10.545	33	*
6	TX	6	3	38	-6.7418	3.3076	-13.225	-0.2589	-12.565	32	*
7	IA	1	1	15	-0.5460	1.6246	-3.730	2.6381	-1.302	13	
7	IA	1	2	16	-0.9058	1.4012	-3.652	1.8406	-2.586	14	*
7	IA	1	4	17	-0.6852	3.4964	-7.538	6.1677	-0.808	15	
7	IA	2	1	12	1.5281	2.8004	-3.961	7.0168	1.890	10	
7	IA	2	2	12	2.5197	2.0025	-1.405	6.4446	4.359	10	*
7	IA	2	3	12	1.9225	1.8767	-1.756	5.6009	3.549	10	*
7	IA	2	4	11	1.8543	3.1132	-4.248	7.9561	1.975	9	
7	IA	3	2	12	-1.7126	1.9790	-5.591	2.1662	-2.998	10	*
7	IA	3	3	14	-0.7976	2.0645	-4.844	3.2488	-1.446	12	
7	KS	1	1	23	4.2886	3.6951	-2.954	11.5310	5.566	19	*
7	KS	1	2	24	0.0917	6.5964	-12.837	13.0207	0.068	20	
7	KS	1	3	26	-0.2169	5.0807	-10.175	9.7412	-0.218	22	
7	KS	1	4	25	1.5026	5.8081	-9.881	12.8865	1.293	21	
7	MO	1	1	36	-3.1977	5.7844	-14.535	8.1398	-3.317	30	*
7	MO	1	2	37	-0.7159	4.7834	-10.091	8.6596	-0.910	31	
7	MO	1	3	40	-2.4149	4.3253	-10.892	6.0626	-3.531	34	*
7	MO	1	4	38	-0.1961	3.4319	-6.923	6.5304	-0.352	32	
7	MO	2	2	32	0.7819	2.6777	-4.466	6.0303	1.652	27	
7	MO	2	3	33	0.6710	3.0418	-5.291	6.6330	1.267	28	

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =O3

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
7	MO	2	4	8	2.4990	3.23503	-3.842	8.8397	2.1849	4	
7	MO	3	2	29	0.4369	1.84978	-3.189	4.0625	1.2719	25	
7	MO	3	4	13	-0.5884	3.95877	-8.348	7.1708	-0.5359	9	
7	MO	4	1	13	0.6869	3.91711	-6.991	8.3644	0.6322	11	
7	MO	4	2	14	2.3278	4.97044	-7.414	12.0699	1.7523	12	
7	MO	4	4	12	-0.2215	4.40397	-8.853	8.4103	-0.1742	10	
7	MO	5	1	14	-2.6612	2.82786	-8.204	2.8814	-3.5211	12	*
7	MO	5	3	14	-1.0140	2.37531	-5.670	3.6416	-1.5973	12	
7	MO	5	4	12	0.2573	2.14721	-3.951	4.4658	0.4151	10	
7	NE	3	1	18	-1.8401	2.78705	-7.303	3.6225	-2.8011	15	*
7	NE	3	4	17	0.8396	1.69447	-2.482	4.1608	2.0431	14	
8	CO	1	2	54	3.6181	4.44761	-5.099	12.3354	5.9779	44	*
8	ND	1	2	14	-4.0179	4.83739	-13.499	5.4634	-3.1078	12	*
8	UT	1	2	54	-1.1893	2.56409	-6.215	3.8363	-3.4085	49	*
9	AZ	200	1	25	1.0413	3.37900	-5.582	7.6641	1.5409	17	
9	AZ	200	2	17	2.9095	2.32979	-1.657	7.4759	5.1491	9	*
9	AZ	200	4	41	-1.6401	3.15651	-7.827	4.5467	-3.3270	33	*
9	AZ	300	3	19	0.0048	5.60159	-10.974	10.9839	0.0037	16	
9	AZ	300	4	19	-0.0260	2.98845	-5.883	5.8313	-0.0380	16	
9	NV	200	2	22	0.2179	4.03336	-7.687	8.1233	0.2534	20	
9	NV	300	1	21	-0.5986	3.97027	-8.380	7.1831	-0.6909	18	
10	OR	1	2	15	-0.6145	3.28944	-7.062	5.8328	-0.7235	13	
10	OR	1	3	9	-5.1844	3.15271	-11.364	0.9949	-4.9333	7	*

POLLUTANT =PB

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	CT	1	3	9	-13.458	9.9231	-32.907	5.9912	-4.0687	6	*
1	ME	1	3	11	2.086	4.9477	-7.611	11.7838	1.3985	9	
1	MA	1	1	11	7.653	11.3306	-14.555	29.8610	2.2402	9	
2	NJ	1	1	6	1.750	8.9433	-15.779	19.2790	0.4793	4	
2	NJ	1	2	12	1.176	7.9817	-14.468	16.8207	0.5106	10	
2	NY	1	2	6	-8.148	15.6083	-38.740	22.4443	-1.2787	4	
2	NY	1	4	11	1.172	9.2938	-17.044	19.3883	0.4184	9	
3	PA	1	2	21	1.923	5.1836	-8.237	12.0825	1.6997	19	
3	PA	1	4	21	-3.895	7.5255	-18.645	10.8550	-2.3718	19	*
4	AL	12	1	27	-18.511	14.4732	-46.879	9.8562	-6.6459	25	*
4	AL	12	2	26	-20.887	12.4202	-45.231	3.4565	-8.5750	24	*
4	AL	12	3	30	-4.875	13.1483	-30.646	20.8954	-2.0309	28	
4	TN	3	1	14	3.839	2.3081	-0.685	8.3629	6.2234	12	*
4	TN	3	3	11	1.773	3.6796	-5.439	8.9855	1.5985	9	
4	TN	3	4	9	0.911	3.0288	-5.025	6.8475	0.9024	7	
6	TX	3	2	11	-2.074	3.8701	-9.660	5.5108	-1.7778	9	

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =PM10

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	VT	1	1	21	8.3673	8.8708	-9.019	25.7540	4.3225	19	*
1	VT	1	3	20	14.6447	11.1379	-7.186	36.4751	5.8802	18	*
1	VT	1	4	8	1.2021	9.2452	-16.919	19.3227	0.3678	6	
3	PA	1	1	21	5.6304	6.8997	-7.893	19.1538	3.7395	19	*
3	PA	1	2	20	4.7788	5.2009	-5.415	14.9725	4.1092	18	*
3	PA	1	3	23	-2.2614	3.1710	-8.476	3.9537	-3.4202	21	*
3	PA	2	3	22	-0.3029	4.0680	-8.276	7.6705	-0.3492	20	
3	PA	2	4	21	3.9130	5.1491	-6.179	14.0052	3.4825	18	*
4	AL	12	2	22	0.3840	4.2756	-7.996	8.7643	0.4213	20	
4	AL	12	3	27	0.4490	4.4501	-8.273	9.1712	0.5243	25	
4	TN	1	3	26	-1.7358	4.7003	-10.948	7.4768	-1.8830	24	
4	TN	1	4	38	-4.5233	8.6628	-21.502	12.4558	-3.2188	35	*
7	IA	3	1	13	14.6414	8.5073	-2.033	31.3157	6.2053	11	*
7	IA	3	2	21	6.4502	12.1854	-17.433	30.3335	2.4257	19	*
7	IA	3	4	12	10.3405	20.9078	-30.639	51.3198	1.7133	10	
8	MT	1	1	22	-4.5776	2.3458	-9.175	0.0202	-9.1528	20	*
8	MT	1	4	48	2.8315	8.3216	-13.479	19.1419	2.3574	46	*
8	ND	1	3	7	-3.3865	2.3294	-7.952	1.1791	-3.8464	5	*
8	UT	1	3	29	-4.0722	10.5983	-24.845	16.7005	-2.0691	27	*

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	ME	110	1	12	-1.7928	5.8392	-13.238	9.6520	-1.0636	10	
1	ME	110	2	13	-4.0692	5.7777	-15.393	7.2551	-2.5394	11	*
1	ME	110	3	13	-5.0292	4.2664	-13.391	3.3330	-4.2502	11	*
1	ME	110	4	13	-0.7438	3.6626	-7.922	6.4349	-0.7322	11	
1	ME	113	3	31	-1.3808	3.2866	-7.822	5.0608	-2.3392	28	*
1	ME	113	4	31	-1.4568	2.6066	-6.566	3.6522	-3.1117	28	*
1	RI	1	1	39	-1.8750	2.9668	-7.690	3.9399	-3.9469	36	*
1	RI	1	3	38	0.5963	3.2618	-5.797	6.9895	1.1268	35	
1	RI	1	4	40	0.7750	4.3605	-7.772	9.3216	1.1241	37	
1	VT	1	1	29	-2.6172	3.3158	-9.116	3.8818	-4.2505	26	*
1	VT	1	2	20	-3.5511	4.6485	-12.662	5.5600	-3.4164	17	*
2	NJ	1	1	100	-0.4840	4.6829	-9.663	8.6945	-1.0336	84	
2	NJ	1	3	105	0.3244	4.6111	-8.713	9.3622	0.7209	89	
2	RQ	1	1	32	-5.3437	5.8503	-16.810	6.1228	-5.1671	28	*
2	VQ	2	1	14	-1.4129	3.6761	-8.618	5.7922	-1.4381	12	
2	VQ	2	2	22	-4.5471	4.4388	-13.247	4.1530	-4.8048	19	*
2	VQ	2	4	28	-3.3614	4.2711	-11.733	5.0100	-4.1645	26	*
3	MD	1	1	64	-0.7188	2.2708	-5.170	3.7320	-2.5324	58	*
3	PA	3	1	41	-2.7921	5.6261	-13.819	8.2350	-3.1778	34	*
3	PA	3	3	40	-0.3723	7.1343	-14.356	13.6110	-0.3300	33	
3	PA	3	4	47	-2.5288	5.3181	-12.952	7.8947	-3.2599	40	*
3	VA	1	2	35	-3.5949	4.2108	-11.848	4.6583	-5.0507	30	*
3	VA	1	3	35	-2.1076	3.9270	-9.804	5.5893	-3.1751	30	*
3	VA	3	2	14	0.2536	4.8192	-9.192	9.6993	0.1969	10	
3	VA	3	3	22	-1.8517	4.4750	-10.623	6.9193	-1.9409	18	
3	VA	3	4	20	-4.6345	4.0144	-12.503	3.2337	-5.1630	16	*
3	VA	815	1	14	-0.1865	2.7624	-5.601	5.2278	-0.2526	12	

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	VA	815	2	15	1.216	1.9243	-2.556	4.9875	2.447	13	*
3	VA	815	3	12	-0.029	3.7130	-7.306	7.2489	-0.027	10	
3	VA	815	4	13	-0.368	1.8102	-3.916	3.1804	-0.732	11	
3	WV	1	1	23	1.162	6.3184	-11.222	13.5464	0.882	19	
3	WV	1	3	29	3.569	8.5108	-13.112	20.2500	2.258	25	*
4	FL	2	1	25	-6.080	5.0704	-16.018	3.8580	-5.996	23	*
4	FL	4	1	17	-1.578	5.5048	-12.368	9.2111	-1.182	15	
4	FL	4	4	13	0.442	4.5922	-8.559	9.4424	0.347	11	
4	FL	7	1	20	-5.243	6.8675	-18.703	8.2178	-3.414	18	*
4	FL	7	2	25	-6.054	8.0127	-21.759	9.6507	-3.778	23	*
4	FL	7	3	22	-6.099	6.5430	-18.923	6.7256	-4.372	20	*
4	FL	7	4	13	-2.696	3.7508	-10.048	4.6555	-2.592	11	*
4	FL	12	1	34	-4.231	5.1883	-14.400	5.9379	-4.755	28	*
4	FL	12	2	39	-0.525	10.2490	-20.613	19.5633	-0.320	33	
4	FL	12	3	32	0.246	4.1539	-7.896	8.3879	0.335	26	
4	FL	12	4	36	1.889	5.6309	-9.147	12.9259	2.013	30	
4	FL	13	1	50	-1.540	3.2293	-7.869	4.7892	-3.372	46	*
4	FL	13	2	51	-1.330	2.3918	-6.018	3.3583	-3.970	47	*
4	FL	13	3	46	-1.989	3.3050	-8.467	4.4886	-4.082	42	*
4	GA	10	2	61	-5.446	4.5306	-14.326	3.4340	-9.388	56	*
4	GA	10	4	80	0.145	4.6405	-8.950	9.2405	0.280	75	
4	KY	1	1	46	-4.910	3.9791	-12.709	2.8894	-8.369	39	*
4	KY	1	2	41	-5.237	4.7252	-14.498	4.0244	-7.097	34	*
4	KY	2	2	8	-0.252	4.9677	-9.989	9.4845	-0.144	6	
4	KY	2	3	14	-1.314	5.4483	-11.993	9.3642	-0.903	12	
4	KY	2	4	8	-2.475	3.2575	-8.860	3.9095	-2.149	6	
4	MS	100	1	25	-4.458	8.1461	-20.424	11.5083	-2.736	23	*
4	MS	100	2	22	-9.475	3.4584	-16.254	-2.6966	-12.850	20	*
4	MS	100	3	18	-8.543	5.4559	-19.236	2.1509	-6.643	16	*
4	MS	100	4	25	-9.108	3.1644	-15.310	-2.9055	-14.391	23	*
4	NC	2	1	20	-12.335	6.3578	-24.797	0.1257	-8.677	18	*
4	NC	2	2	24	-9.139	3.9269	-16.835	-1.4419	-11.401	22	*
4	NC	2	4	25	-7.244	3.5753	-14.252	-0.2368	-10.131	23	*
4	SC	1	1	10	-0.389	9.0548	-18.136	17.3587	-0.136	8	
4	SC	1	2	13	-0.027	6.5235	-12.813	12.7592	-0.015	11	
4	SC	1	3	9	0.899	4.9775	-8.857	10.6551	0.542	6	
4	SC	1	4	14	-1.434	7.1372	-15.423	12.5551	-0.752	12	
4	TN	1	3	32	-1.480	4.1038	-9.524	6.5634	-2.040	30	
5	IL	3	1	57	1.054	3.4199	-5.649	7.7573	2.328	50	*
5	IL	3	3	63	-0.916	3.1345	-7.059	5.2279	-2.319	56	*
5	IN	1	2	54	-0.961	4.6454	-10.066	8.1440	-1.520	45	
5	IN	1	3	58	-0.772	5.1119	-10.792	9.2468	-1.151	49	
5	IN	8	1	18	-2.836	1.6060	-5.984	0.3118	-7.492	15	*
5	IN	8	2	17	-1.673	3.0711	-7.692	4.3465	-2.246	14	*
5	IN	8	3	18	-1.889	2.9474	-7.666	3.8878	-2.719	15	*
5	IN	8	4	20	-1.102	2.5735	-6.146	3.9420	-1.915	17	
5	IN	10	1	14	6.377	7.2096	-7.754	20.5074	3.309	12	*
5	IN	10	2	10	3.153	5.2208	-7.080	13.3854	1.910	8	
5	IN	10	3	15	3.197	6.6342	-9.806	16.1998	1.866	13	
5	IN	10	4	12	-2.808	5.7125	-14.005	8.3883	-1.703	10	
5	IN	100	1	29	3.023	7.2093	-11.107	17.1537	2.258	24	*
5	IN	100	2	31	1.762	4.5656	-7.186	10.7110	2.149	26	*
5	IN	100	3	26	-0.665	3.1423	-6.824	5.4934	-1.080	21	

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
5	IN	100	4	26	5.2924	4.60304	-3.730	14.3143	5.8626	22	*
5	MI	2	2	41	-3.6507	7.67610	-18.696	11.3945	-3.0453	34	*
5	MI	2	4	49	-3.1375	8.74953	-20.287	14.0116	-2.5101	42	*
5	OH	1	2	11	2.1462	5.34922	-8.338	12.6306	1.3307	9	
5	OH	1	4	13	0.4067	2.03383	-3.580	4.3930	0.7210	11	
5	OH	2	1	30	-0.6322	5.92861	-12.252	10.9878	-0.5841	24	
5	OH	2	2	15	-0.7993	2.32308	-5.353	3.7540	-1.3326	11	
5	OH	2	4	14	1.7752	5.68506	-9.367	12.9179	1.1684	11	
5	OH	4	2	15	-1.7144	5.35032	-12.201	8.7722	-1.2410	13	
5	OH	6	1	12	-4.5483	6.44869	-17.188	8.0912	-2.4432	10	*
5	OH	6	2	13	-4.2519	4.85834	-13.774	5.2704	-3.1555	11	*
5	OH	6	3	13	0.8613	4.95638	-8.853	10.5758	0.6265	11	
5	OH	6	4	12	1.1419	4.32101	-7.327	9.6110	0.9154	10	
5	OH	8	1	79	0.1933	4.86640	-9.345	9.7315	0.3531	73	
5	OH	9	1	31	-2.1971	2.97954	-8.037	3.6428	-4.1057	27	*
5	OH	9	2	30	-1.8157	5.09748	-11.807	8.1753	-1.9510	26	
5	OH	9	3	27	-1.9342	5.86676	-13.433	9.5647	-1.7131	22	
5	OH	9	4	33	-0.5151	4.92385	-10.166	9.1357	-0.6009	27	
5	OH	10	1	14	-1.4852	2.51528	-6.415	3.4448	-2.2093	12	*
5	OH	10	2	17	-1.1713	3.20088	-7.445	5.1024	-1.5088	15	
5	OH	10	3	13	-3.8347	2.85507	-9.431	1.7612	-4.8427	11	*
5	OH	10	4	14	-3.4361	2.60530	-8.542	1.6703	-4.9348	12	*
5	OH	12	1	16	1.5144	4.64891	-7.598	10.6262	1.3030	14	
5	OH	12	2	14	-0.6411	3.88379	-8.253	6.9711	-0.6176	12	
5	OH	12	3	14	-2.5852	4.55062	-11.504	6.3340	-2.1256	12	
5	OH	13	3	11	-1.4739	3.57392	-8.479	5.5310	-1.3678	9	
5	OH	13	4	9	0.9592	4.18986	-7.253	9.1713	0.6868	7	
5	OH	14	2	28	1.3708	3.53348	-5.555	8.2964	2.0528	24	
5	OH	14	3	26	0.5776	2.90113	-5.109	6.2638	1.0152	22	
5	OH	15	2	26	-0.0427	7.49408	-14.731	14.6457	-0.0291	24	
5	OH	15	4	28	-1.4958	2.52792	-6.451	3.4589	-3.1310	26	*
5	OH	16	1	14	-2.7882	4.04468	-10.716	5.1394	-2.5793	12	*
5	OH	16	2	13	-0.8411	3.79896	-8.287	6.6049	-0.7982	11	
5	OH	16	3	13	0.3028	2.81936	-5.223	5.8287	0.3872	11	
5	WI	1	3	90	0.3909	3.38964	-6.253	7.0346	1.0941	77	
6	AR	1	1	12	-7.3731	5.63436	-18.416	3.6703	-4.5331	10	*
6	AR	1	2	8	-3.9939	2.13402	-8.177	0.1888	-5.2935	6	*
6	LA	1	2	40	-4.6359	3.42632	-11.351	2.0797	-8.5572	34	*
6	LA	1	4	38	-4.8879	4.28181	-13.280	3.5045	-7.0369	32	*
6	NM	1	3	45	4.5105	4.50511	-4.320	13.3405	6.7162	37	*
6	OK	101	2	27	-0.1052	2.87672	-5.744	5.5332	-0.1899	23	
6	OK	103	1	12	0.7407	2.86170	-4.868	6.3497	0.8967	10	
6	OK	103	2	12	-1.0185	2.48866	-5.896	3.8592	-1.4177	10	
6	OK	103	3	12	-2.5001	2.66005	-7.715	2.7151	-3.2549	10	*
6	TX	6	1	32	-4.7285	5.33282	-15.161	5.7239	-5.0158	27	*
6	TX	6	2	30	-4.1562	4.44518	-12.869	4.5563	-5.1212	25	*
6	TX	6	3	30	-5.7918	4.53606	-14.682	3.0989	-6.9935	25	*
7	IA	2	1	12	0.8091	2.47366	-4.039	5.6574	1.1330	10	
7	IA	2	2	12	-1.4340	5.49438	-12.203	9.3350	-0.9041	10	
7	IA	2	3	21	-0.3741	4.56976	-9.331	8.5826	-0.3752	17	
7	IA	2	4	26	0.2667	3.86114	-7.281	7.8545	0.3786	21	
7	IA	3	2	42	-2.8797	4.65192	-11.997	6.2381	-4.0118	35	*
7	IA	3	3	42	0.4440	4.00708	-7.410	8.2979	0.7182	35	

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
7	IA	3	4	38	0.3081	4.16283	-7.851	8.4672	0.4562	31	
7	KS	1	1	8	-0.1467	2.22180	-4.501	4.2081	-0.1867	6	
7	MO	1	1	28	-3.3122	4.39244	-11.921	5.2970	-3.9901	23	*
7	MO	1	3	37	-2.6281	6.94079	-16.232	10.9759	-2.3032	31	*
7	MO	3	1	27	-2.9020	4.46252	-11.649	5.8445	-3.3791	24	*
7	MO	3	3	22	1.9719	7.63023	-12.983	16.9271	1.2121	19	
7	MO	3	4	27	-3.2954	7.56848	-18.130	11.5388	-2.2625	24	*
7	MO	4	1	19	-2.6257	9.53693	-21.318	16.0666	-1.2001	16	
7	MO	4	2	20	-1.3034	7.66691	-16.331	13.7238	-0.7603	17	
7	MO	4	3	19	-1.2183	4.96647	-10.953	8.5160	-1.0693	16	
7	MO	4	4	19	-1.3778	4.90922	-11.000	8.2442	-1.2234	16	
7	MO	5	1	13	2.1965	6.08395	-9.728	14.1210	1.3017	11	
7	MO	5	3	14	-1.2664	9.84343	-20.560	18.0267	-0.4814	12	
7	MO	5	4	13	0.3340	6.13472	-11.690	12.3580	0.1963	11	
8	CO	1	1	11	-1.2169	3.30697	-7.699	5.2648	-1.2205	9	
8	CO	1	3	11	4.2929	4.93003	-5.370	13.9558	2.8880	9	*
8	CO	1	4	9	-2.7116	3.50315	-9.578	4.1546	-2.3221	7	
8	MT	1	1	23	0.6741	6.26129	-11.598	12.9463	0.5164	21	
8	ND	1	1	26	-2.0192	3.26268	-8.414	4.3756	-3.1557	22	*
8	ND	1	2	27	-3.1687	2.46412	-7.998	1.6609	-6.6820	23	*
8	ND	1	3	22	-3.2323	3.54844	-10.187	3.7226	-4.2726	18	*
8	ND	1	4	28	-1.7063	3.32671	-8.227	4.8140	-2.7141	24	*
8	UT	1	2	50	-0.5823	2.00343	-4.509	3.3444	-2.0554	46	*
9	CA	36	2	43	1.0897	7.01038	-12.651	14.8301	1.0193	37	
9	CA	36	3	33	2.3280	5.64799	-8.742	13.3981	2.3678	27	*
9	NV	200	1	22	-0.3870	2.86848	-6.009	5.2352	-0.6328	20	
9	NV	200	2	22	-0.0188	2.39171	-4.707	4.6690	-0.0369	20	
10	ID	1	3	28	3.1883	3.36934	-3.416	9.7922	5.0071	26	*
10	ID	1	4	20	-3.6830	3.73837	-11.010	3.6443	-4.4058	18	*
10	WA	1	1	82	-0.5598	4.05263	-8.503	7.3833	-1.2509	70	
10	WA	1	4	48	-0.1639	3.01784	-6.079	5.7511	-0.3762	35	

POLLUTANT =TSP

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	CT	1	3	42	0.067	3.33873	-6.477	6.6104	0.129	39	
1	CT	1	4	42	-0.317	8.56558	-17.105	16.4720	-0.239	39	
1	ME	1	1	63	0.605	4.21071	-7.648	8.8579	1.140	58	
1	ME	1	2	59	1.871	5.24021	-8.400	12.1414	2.742	54	*
1	ME	1	4	28	1.021	4.73840	-8.266	10.3087	1.141	26	
1	ME	108	1	36	-4.601	3.82913	-12.106	2.9044	-7.209	34	*
1	ME	110	2	29	4.312	4.61642	-4.737	13.3598	5.030	27	*
1	MA	1	1	29	2.052	8.07947	-13.784	17.8874	1.367	27	
1	MA	1	2	28	-2.356	2.91673	-8.073	3.3606	-4.275	26	*
1	MA	1	3	30	-0.318	5.84066	-11.765	11.1301	-0.298	28	
1	MA	1	4	27	1.510	8.65382	-15.451	18.4719	0.907	25	
1	NH	1	3	30	1.474	4.75412	-7.844	10.7917	1.698	28	
1	RI	1	1	28	-0.340	5.73590	-11.583	10.9021	-0.314	26	
1	RI	1	2	26	0.437	4.04183	-7.485	8.3591	0.551	24	
1	RI	1	3	30	2.284	5.00362	-7.524	12.0906	2.500	28	*

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =TSP

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	RI	1	4	28	3.817	7.15295	-10.203	17.8364	2.823	26	*
1	VT	1	1	26	-0.362	2.53277	-5.326	4.6026	-0.728	24	
1	VT	1	2	16	-3.293	3.39433	-9.946	3.3596	-3.881	14	*
1	VT	1	4	23	0.199	1.92036	-3.564	3.9634	0.498	21	
3	DE	1	4	20	-5.274	6.43785	-17.892	7.3445	-3.663	18	*
3	MD	3	2	24	2.512	2.23516	-1.869	6.8925	5.505	22	*
3	MD	3	3	30	1.128	2.42567	-3.626	5.8825	2.547	28	*
3	MD	6	1	23	-4.132	3.12754	-10.262	1.9983	-6.336	21	*
3	MD	6	2	29	-0.929	3.51964	-7.827	5.9695	-1.421	27	
3	MD	6	3	31	4.346	3.22965	-1.984	10.6760	7.492	29	*
3	MD	6	4	22	1.352	3.98679	-6.462	9.1658	1.590	20	
3	PA	1	1	49	-2.532	6.92774	-16.110	11.0466	-2.558	45	*
3	PA	1	2	48	-0.903	4.25194	-9.237	7.4303	-1.472	44	
3	PA	1	4	52	-4.448	5.24728	-14.733	5.8364	-6.113	48	*
3	PA	2	3	46	0.910	2.46223	-3.916	5.7359	2.506	43	*
3	PA	2	4	35	-1.029	3.82687	-8.530	6.4712	-1.591	32	
3	PA	3	1	33	1.831	3.45195	-4.935	8.5964	3.046	30	*
3	PA	3	4	36	3.677	4.74495	-5.623	12.9771	4.650	33	*
3	VA	1	2	42	-1.449	5.37364	-11.982	9.0831	-1.748	39	
3	VA	1	3	31	1.120	4.31225	-7.332	9.5722	1.446	28	
3	VA	1	4	17	4.977	4.45858	-3.762	13.7158	4.603	15	*
3	WV	1	1	23	3.311	3.13774	-2.839	9.4606	5.060	21	*
3	WV	1	2	26	5.534	2.93547	-0.220	11.2874	9.613	24	*
4	AL	11	1	27	-5.154	5.97957	-16.874	6.5658	-4.479	25	*
4	AL	11	3	27	-12.768	3.58110	-19.787	-5.7493	-18.527	25	*
4	AL	11	4	23	-9.712	6.99606	-23.425	3.9998	-6.658	21	*
4	AL	12	2	38	2.765	5.01166	-7.058	12.5881	3.401	36	*
4	AL	12	4	26	2.728	3.91579	-4.947	10.4033	3.553	24	*
4	AL	14	1	34	0.914	6.93112	-12.671	14.4993	0.769	32	
4	AL	14	2	41	3.051	3.85191	-4.499	10.6005	5.071	39	*
4	AL	15	1	29	-0.113	7.89247	-15.582	15.3567	-0.077	27	
4	AL	15	2	28	-3.884	6.07698	-15.795	8.0269	-3.382	26	*
4	FL	1	2	25	-4.022	7.81032	-19.330	11.2861	-2.575	23	*
4	FL	1	4	27	-1.428	3.03554	-7.378	4.5216	-2.444	25	*
4	FL	2	2	29	-1.165	3.19880	-7.434	5.1050	-1.961	27	
4	FL	2	3	30	-0.701	4.11595	-8.768	7.3663	-0.933	28	
4	FL	2	4	28	-0.250	4.15607	-8.396	7.8957	-0.319	26	
4	FL	3	1	26	2.640	3.84991	-4.906	10.1859	3.497	24	*
4	FL	3	2	26	-0.738	5.91916	-12.339	10.8640	-0.635	24	
4	FL	3	3	29	2.683	5.26643	-7.639	13.0050	2.743	27	*
4	FL	3	4	16	0.113	6.46394	-12.557	12.7820	0.070	14	
4	FL	4	2	29	-0.998	1.99497	-4.908	2.9126	-2.693	27	*
4	FL	5	1	26	-3.465	6.19781	-15.613	8.6827	-2.851	24	*
4	FL	5	3	18	-3.481	8.54258	-20.224	13.2629	-1.729	16	
4	FL	5	4	14	-1.805	3.60854	-8.877	5.2681	-1.871	12	
4	FL	6	1	25	-6.330	4.39345	-14.941	2.2812	-7.204	23	*
4	FL	6	2	16	3.933	9.01391	-13.734	21.6002	1.745	14	
4	FL	6	4	18	-6.641	9.26272	-24.796	11.5143	-3.042	16	*
4	FL	7	2	28	-0.940	3.67541	-8.144	6.2635	-1.354	26	
4	FL	7	3	26	-1.617	5.39785	-12.197	8.9624	-1.528	24	
4	FL	7	4	22	-1.122	3.44821	-7.881	5.6363	-1.526	20	
4	FL	11	3	30	-1.346	5.06898	-11.281	8.5893	-1.454	27	
4	FL	11	4	18	-2.144	4.94023	-11.827	7.5384	-1.842	16	

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =TSP

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
4	FL	12	2	28	1.8637	3.1454	-4.301	8.0288	3.1353	26	*
4	FL	12	4	29	4.9030	3.5541	-2.063	11.8690	7.4289	27	*
4	FL	14	1	28	2.1275	10.3374	-18.134	22.3888	1.0890	26	
4	FL	14	2	22	-4.9470	6.9376	-18.545	8.6508	-3.3446	20	*
4	FL	14	4	23	4.8740	6.8286	-8.510	18.2580	3.4231	21	*
4	FL	16	2	23	-0.1795	4.1177	-8.250	7.8911	-0.2091	21	
4	FL	17	1	44	-2.2069	4.2641	-10.564	6.1507	-3.4331	41	*
4	FL	17	3	39	0.5767	4.2683	-7.789	8.9425	0.8438	36	
4	FL	18	3	32	1.5618	6.1413	-10.475	13.5987	1.4386	30	
4	FL	18	4	24	-1.6328	9.3928	-20.043	16.7771	-0.8516	22	
4	FL	20	1	30	0.6909	4.9549	-9.021	10.4026	0.7637	28	
4	FL	20	2	28	2.7604	3.3906	-3.885	9.4059	4.3081	26	*
4	MS	100	1	39	3.6408	5.6026	-7.340	14.6218	4.0583	36	*
4	MS	100	3	43	3.1691	4.8038	-6.246	12.5845	4.3260	40	*
4	NC	2	2	28	-1.1443	4.8364	-10.624	8.3350	-1.2520	26	
4	NC	3	4	27	-2.4063	2.2853	-6.886	2.0728	-5.4714	25	*
4	NC	4	2	29	0.2319	6.0413	-11.609	12.0728	0.2067	27	
4	NC	4	4	23	-2.0451	7.3027	-16.358	12.2683	-1.3430	21	
4	SC	1	1	51	-1.0264	6.2845	-13.344	11.2913	-1.1663	47	
4	SC	1	2	58	-1.1083	3.6755	-8.312	6.0957	-2.2964	54	*
4	SC	1	3	57	-0.2939	2.8250	-5.831	5.2431	-0.7854	53	
4	SC	1	4	40	0.6889	3.3764	-5.929	7.3066	1.2904	36	
4	TN	2	1	28	-3.6125	5.4165	-14.229	7.0038	-3.5291	26	*
4	TN	2	2	27	0.7043	3.9929	-7.122	8.5304	0.9165	25	
4	TN	2	3	26	1.2398	5.3258	-9.199	11.6784	1.1870	24	
4	TN	2	4	21	0.4961	11.0274	-21.118	22.1099	0.2062	19	
4	TN	3	1	28	0.5251	2.2839	-3.951	5.0016	1.2167	26	
4	TN	3	4	28	-0.7139	2.6842	-5.975	4.5471	-1.4074	26	
4	TN	4	1	27	0.8584	3.5074	-6.016	7.7328	1.2717	25	
4	TN	4	4	26	-3.9854	7.4196	-18.528	10.5570	-2.7389	24	*
4	TN	5	2	29	-1.1464	2.2563	-5.569	3.2759	-2.7361	27	*
4	TN	5	4	28	-0.7518	1.8008	-4.281	2.7779	-2.2090	26	*
5	IL	1	2	52	-4.0481	3.5954	-11.095	2.9988	-8.1192	48	*
5	IL	1	3	60	-2.4229	3.3826	-9.053	4.2069	-5.5485	56	*
5	IL	2	1	25	-0.0558	3.0602	-6.054	5.9421	-0.0912	23	
5	IL	2	2	29	-2.0809	3.0139	-7.988	3.8264	-3.7180	27	*
5	IL	2	4	26	0.2404	3.5931	-6.802	7.2829	0.3412	24	
5	IN	1	1	27	-1.9273	4.0017	-9.771	5.9159	-2.5026	25	*
5	IN	2	1	30	2.5853	5.1638	-7.536	12.7064	2.7422	28	*
5	IN	2	2	28	8.6936	6.2885	-3.632	21.0190	7.3153	26	*
5	IN	2	3	30	5.3035	5.0920	-4.677	15.2837	5.7047	28	*
5	IN	2	4	22	4.8938	8.7069	-12.172	21.9594	2.6363	20	*
5	IN	3	1	29	-1.5702	4.9364	-11.245	8.1051	-1.7129	27	
5	IN	3	2	30	0.3619	1.8342	-3.233	3.9570	1.0807	28	
5	IN	3	3	29	0.9668	2.1990	-3.343	5.2769	2.3676	27	*
5	IN	3	4	28	-0.1276	2.5832	-5.191	4.9355	-0.2613	26	
5	IN	5	3	29	-1.7175	3.4556	-8.490	5.0555	-2.6765	27	*
5	IN	5	4	23	-1.6354	2.0190	-5.593	2.3218	-3.8846	21	*
5	IN	8	3	21	-1.2575	3.3418	-7.808	5.2924	-1.7244	17	
5	IN	9	1	28	1.0041	2.7701	-4.425	6.4335	1.9181	26	
5	IN	9	2	23	0.7776	2.9537	-5.012	6.5668	1.2626	21	
5	IN	9	3	8	0.9669	1.9624	-2.879	4.8133	1.3936	6	
			4	17	-1.0537	3.2414	-7.407	5.2995	-1.3403	15	

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =TSP

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
5	IN	10	2	28	0.7079	3.0878	-5.344	6.7600	1.2131	26	
5	IN	10	3	12	2.9273	1.2631	0.452	5.4030	8.0280	10	*
5	IN	10	4	21	0.3574	2.8017	-5.134	5.8488	0.5846	19	
5	IN	100	2	38	2.1666	6.1215	-9.832	14.1648	2.1818	35	*
5	MI	1	1	43	1.2614	6.5610	-11.598	14.1210	1.2607	40	
5	MI	1	2	43	0.3556	4.9107	-9.269	9.9807	0.4749	40	
5	MI	1	3	33	1.1182	3.0665	-4.892	7.1286	2.0947	30	*
5	MI	2	1	29	7.3547	6.4750	-5.336	20.0457	6.1168	27	*
5	MI	2	2	23	3.7832	4.4106	-4.862	12.4280	4.1137	21	*
5	MI	2	3	27	1.9800	4.6932	-7.219	11.1786	2.1921	25	*
5	MI	2	4	18	-1.0318	12.4746	-25.482	23.4185	-0.3509	16	
5	MN	1	1	29	2.7236	4.9517	-6.982	12.4289	2.9621	27	*
5	MN	1	4	19	6.4435	7.4391	-8.137	21.0241	3.7756	17	*
5	OH	1	2	28	-6.8863	9.5324	-25.570	11.7971	-3.8227	26	*
5	OH	2	2	20	-3.8901	5.8880	-15.431	7.6504	-2.9547	18	*
5	OH	2	4	24	-6.8923	8.6418	-23.830	10.0457	-3.9072	22	*
5	OH	4	2	27	0.5883	4.1319	-7.510	8.6869	0.7398	25	
5	OH	4	3	25	1.7510	2.6763	-3.494	6.9965	3.2714	23	*
5	OH	5	2	28	-2.1020	3.0960	-8.170	3.9661	-3.5926	26	*
5	OH	5	4	16	-2.7763	4.9965	-12.569	7.0168	-2.2226	14	*
5	OH	6	2	24	2.0395	4.0594	-5.917	9.9959	2.4613	22	*
5	OH	6	3	20	-0.9979	3.1943	-7.259	5.2629	-1.3971	18	
5	OH	6	4	22	-1.6073	8.2905	-17.857	14.6421	-0.9094	20	
5	OH	8	1	44	-0.9802	3.4425	-7.727	5.7671	-1.8886	41	
5	OH	8	2	32	-1.3307	3.0221	-7.254	4.5926	-2.4909	29	*
5	OH	8	3	32	-3.0344	4.5966	-12.044	5.9750	-3.7343	30	*
5	OH	9	2	38	-1.3502	8.1192	-17.264	14.5634	-1.0251	35	
5	OH	12	1	24	-0.1133	7.8218	-15.444	15.2175	-0.0709	22	
5	OH	12	2	29	5.6322	11.4357	-16.782	28.0462	2.6522	27	*
5	OH	12	3	29	8.1084	9.0950	-9.718	25.9346	4.8010	27	*
5	OH	13	1	30	2.9489	2.8194	-2.577	8.4749	5.7289	28	*
5	OH	13	3	22	-1.4384	4.5944	-10.443	7.5666	-1.4684	20	
5	OH	14	2	20	-3.1533	9.9127	-22.582	16.2756	-1.4226	18	
5	OH	14	3	31	-0.7501	7.4507	-15.354	13.8533	-0.5605	29	
5	OH	14	4	24	-8.1060	7.7852	-23.365	7.1530	-5.1009	22	*
5	OH	15	2	27	-0.2944	2.2771	-4.757	4.1687	-0.6717	25	
5	OH	15	4	26	1.2617	2.0529	-2.762	5.2853	3.1339	24	*
5	OH	16	1	30	-1.8970	3.5113	-8.779	4.9852	-2.9590	28	*
5	OH	16	2	30	-0.3976	2.6480	-5.588	4.7924	-0.8224	28	
5	OH	16	4	27	-0.2408	3.8481	-7.783	7.3014	-0.3252	25	
6	AR	1	1	17	-3.8715	5.0119	-13.695	5.9518	-3.1849	15	*
6	AR	1	3	25	-0.9284	4.5082	-9.764	7.9077	-1.0297	23	
6	AR	2	1	17	-3.8657	5.0156	-13.696	5.9650	-3.1778	15	*
6	LA	1	1	25	-3.5530	6.8985	-17.074	9.9680	-2.5752	23	*
6	LA	1	3	30	4.0319	4.6221	-5.028	13.0913	4.7777	28	*
6	NM	1	1	42	4.9202	11.0780	-16.793	26.6331	2.8784	39	*
6	OK	102	2	25	6.1004	5.7375	-5.145	17.3459	5.3163	23	*
6	OK	103	2	28	0.0158	2.1313	-4.162	4.1933	0.0393	26	
6	TX	1	1	57	-3.7059	7.4732	-18.353	10.9416	-3.7439	53	*
6	TX	1	2	56	1.8378	5.4600	-8.864	12.5395	2.5188	52	*
6	TX	1	3	60	-0.9443	6.4647	-13.615	11.7265	-1.1314	56	
6	TX	2	1	38	0.2137	4.1168	-7.855	8.2826	0.3200	35	
6	TX	3	1	23	-1.4700	8.1219	-17.389	14.4489	-0.8680	21	

TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =TSP

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
6	TX	4	1	30	1.4798	4.4563	-7.255	10.2141	1.8188	28	
6	TX	4	2	25	2.3292	3.2019	-3.947	8.6051	3.6372	23	*
6	TX	5	2	21	1.5414	7.7620	-13.672	16.7550	0.9100	19	
6	TX	6	1	28	1.5142	7.6948	-13.568	16.5960	1.0413	26	
6	TX	6	2	28	0.9391	5.0218	-8.904	10.7818	0.9895	26	
6	TX	7	1	26	-0.2528	1.7761	-3.734	3.2283	-0.7259	24	
6	TX	7	2	30	-1.3372	2.0649	-5.384	2.7100	-3.5469	28	*
7	IA	1	1	21	-1.0164	3.5507	-7.976	5.9430	-1.3117	19	
7	IA	1	2	26	0.9528	2.5916	-4.127	6.0324	1.8746	24	
7	IA	2	1	30	-4.9079	5.8851	-16.443	6.6269	-4.5678	28	*
7	IA	2	3	28	-2.1736	2.4165	-6.910	2.5628	-4.7595	26	*
7	IA	3	1	27	-0.9729	7.7108	-16.086	14.1403	-0.6556	25	
7	IA	3	3	28	1.8427	4.8897	-7.741	11.4266	1.9941	26	
7	IA	3	4	27	2.3955	5.7611	-8.896	13.6873	2.1606	25	*
7	KS	1	1	43	2.1120	4.6755	-7.052	11.2761	2.9621	40	*
7	KS	1	2	35	5.5527	3.7164	-1.732	12.8369	8.8391	32	*
7	KS	1	4	41	0.8735	8.2209	-15.240	16.9864	0.6803	38	
7	MO	1	1	20	-3.4436	10.0633	-23.168	16.2805	-1.5303	18	
7	MO	1	2	21	-1.0082	4.5306	-9.888	7.8717	-1.0198	19	
7	MO	2	1	29	-3.5240	3.3629	-10.115	3.0673	-5.6432	27	*
7	MO	2	2	27	-6.3033	4.0376	-14.217	1.6104	-8.1120	25	*
7	MO	2	4	24	0.4615	3.7141	-6.818	7.7412	0.6088	22	
7	MO	3	1	30	4.7235	4.7604	-4.607	14.0539	5.4348	28	*
7	MO	3	2	27	2.1330	5.3034	-8.262	12.5276	2.0898	25	*
7	MO	3	3	9	-1.9452	1.8680	-5.606	1.7161	-3.1239	7	*
7	MO	4	1	29	-0.3568	3.8220	-7.848	7.1344	-0.5027	27	
7	MO	5	1	23	-1.6768	2.2701	-6.126	2.7725	-3.5425	21	*
7	MO	5	2	28	-0.4356	2.4415	-5.221	4.3498	-0.9441	26	
7	MO	5	3	12	-1.1906	1.9604	-5.033	2.6518	-2.1038	10	
7	NE	1	1	23	-2.1125	10.0146	-21.741	17.5162	-1.0116	21	
7	NE	1	4	19	-3.9557	7.7840	-19.212	11.3009	-2.2151	17	*
7	NE	2	1	15	-0.0330	2.9886	-5.891	5.8246	-0.0427	13	
8	MT	1	2	91	1.3041	5.6690	-9.807	12.4154	2.1944	85	*
8	MT	4	2	26	1.1717	5.8068	-10.210	12.5530	1.0289	24	
8	ND	1	1	22	-0.6340	11.0380	-22.269	21.0006	-0.2694	20	
8	ND	1	2	27	1.7533	5.5341	-9.094	12.6002	1.6462	25	
8	ND	1	3	17	5.5532	3.2094	-0.737	11.8437	7.1341	15	*
8	SD	1	1	21	9.0881	8.2549	-7.091	25.2678	5.0451	19	*
8	UT	1	2	28	4.3598	5.9028	-7.210	15.9292	3.9083	26	*
8	UT	1	3	21	-1.1235	7.1250	-15.089	12.8416	-0.7226	19	
8	WY	1	1	14	3.8549	7.0123	-9.889	17.5989	2.0569	12	
8	WY	1	2	26	1.7147	3.4449	-5.037	8.4667	2.5381	24	*
8	WY	1	4	24	3.0260	5.2756	-7.314	13.3663	2.8100	22	*
9	AZ	100	1	19	2.0043	6.5684	-10.870	14.8783	1.3301	17	
9	AZ	100	2	28	1.2356	5.9880	-10.501	12.9720	1.0919	26	
9	AZ	300	1	20	0.2612	5.5891	-10.693	11.2159	0.2090	18	
9	AZ	300	2	27	9.1273	5.6234	-1.895	20.1492	8.4339	25	*
9	AZ	300	3	18	6.7224	4.2908	-1.688	15.1325	6.6469	16	*
9	CA	4	1	30	0.9969	5.0295	-8.861	10.8548	1.0857	28	
9	CA	4	2	30	1.5907	3.8732	-6.001	9.1821	2.2494	28	*
9	CA	4	3	21	0.5728	4.3200	-7.894	9.0399	0.6076	19	
9	CA	4	4	30	0.1369	4.4541	-8.593	8.8668	0.1683	28	
9	HI	120	2	27	-5.6191	3.0795	-11.655	0.4167	-9.4813	25	*

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TABLE C-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES BY QUARTERS

POLLUTANT =TSP

REGION	STATE	REPORTING ORGANIZATION	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
9	HI	120	3	24	0.8338	4.44451	-7.877	9.5451	0.9191	22	
9	HI	120	4	18	7.1698	3.34292	0.618	13.7219	9.0995	16	*
9	NV	300	1	30	-1.1033	3.91531	-8.777	6.5707	-1.5434	28	
10	AK	20	3	33	-2.2128	2.64127	-7.390	2.9641	-4.8127	30	*
10	ID	1	1	43	-2.3147	4.67927	-11.486	6.8566	-3.2438	40	*
10	OR	1	2	71	-0.8973	4.45069	-9.621	7.8261	-1.6987	66	
10	WA	1	1	62	0.6809	6.96100	-12.963	14.3245	0.7702	57	

TABLE C-1B. REPORTING ORGANIZATIONS WITH HOMOGENEOUS VARIANCE AND EQUAL MEANS ACROSS SITES AND QUARTERS

TABLE C-1B. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES AND QUARTERS

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	PA	3	74	-0.7491	4.79592	-10.149	8.6509	-1.3437	62	
3	WV	1	42	-1.7292	8.12972	-17.663	14.2050	-1.3785	34	
4	KY	2	47	-2.5815	2.49162	-7.465	2.3021	-7.1030	38	*
4	NC	3	77	-1.5672	2.65095	-6.763	3.6286	-5.1877	65	*
4	TN	3	54	-1.9680	1.54144	-4.989	1.0532	-9.3821	45	*
5	IL	3	98	-0.1094	3.43195	-6.836	6.6172	-0.3156	88	
6	TX	6	36	-2.4518	2.88263	-8.102	3.1981	-5.1033	30	*
7	MO	3	45	5.4238	5.85775	-6.057	16.9050	6.2112	39	*
7	NE	2	30	2.0464	1.57124	-1.033	5.1261	7.1337	24	*
9	AZ	300	27	0.2955	2.05475	-3.732	4.3229	0.7474	22	

POLLUTANT =NO2

REGION	STATE	REPORTING ORGANIZATION	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
2	NY	1	46	1.2221	4.65411	-7.900	10.3441	1.7809	35	
3	DE	1	56	1.7698	5.00437	-8.039	11.5784	2.6466	50	*
3	PA	2	103	-0.2714	6.56543	-13.140	12.5968	-0.4195	95	
4	FL	18	24	2.9181	5.73520	-8.323	14.1591	2.4926	20	*
4	GA	10	48	-0.7847	5.56859	-11.699	10.1297	-0.9763	44	
4	NC	2	44	-0.5293	3.69582	-7.773	6.7145	-0.9499	40	
5	WI	1	40	-2.2386	3.17149	-8.455	3.9775	-4.4642	34	*
6	OK	103	36	0.6842	4.16765	-7.484	8.8528	0.9850	30	
6	TX	2	44	1.7400	6.31628	-10.640	14.1199	1.8273	38	
7	MO	1	48	2.3832	7.05863	-11.452	16.2181	2.3392	40	*
7	MO	4	38	-0.1747	6.27635	-12.476	12.1270	-0.1715	32	

POLLUTANT =O3

REGION	STATE	REPORTING ORGANIZATION	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	RI	1	55	-4.0634	3.02719	-9.997	1.8699	-9.955	51	*
3	PA	3	47	2.7275	5.08295	-7.235	12.6900	3.679	38	*
3	VA	3	40	-2.0728	3.28893	-8.519	4.3735	-3.986	32	*
4	AL	13	14	-3.7857	3.00666	-9.679	2.1073	-4.711	10	*
4	FL	11	77	-4.5315	5.16961	-14.664	5.6010	-7.692	72	*
4	FL	12	49	1.5438	4.08267	-6.458	9.5459	2.647	43	*
4	KY	2	19	0.1830	6.54278	-12.641	13.0069	0.122	15	
4	TN	2	33	1.0939	2.53202	-3.869	6.0566	2.482	29	*
4	TN	3	37	1.5808	2.82692	-3.960	7.1215	3.401	31	*
4	TN	5	28	-0.5100	2.92947	-6.252	5.2317	-0.921	22	
5	IN	2	24	-1.2399	2.98849	-7.097	4.6175	-2.033	20	
5	IN	8	78	-0.7729	3.42045	-7.477	5.9311	-1.996	66	
5	MI	2	98	-1.7180	3.22689	-8.043	4.6068	-5.270	82	*
5	OH	1	64	0.1192	5.32047	-10.309	10.5473	0.179	55	
5	OH	2	32	-1.7850	5.52892	-12.622	9.0517	-1.826	24	
5	OH	9	47	0.0965	1.96432	-3.754	3.9466	0.337	39	
5	OH	10	58	-0.6979	2.13323	-4.879	3.4832	-2.492	46	*
6	NM	1	42	-1.0814	4.15779	-9.231	7.0678	-1.686	35	

TABLE C-1B. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES AND QUARTERS

POLLUTANT =O3

REGION	STATE	REPORTING ORGANIZATION	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
6	TX	6	116	-6.0842	3.77972	-13.492	1.32409	-17.337	98	*
7	IA	2	47	1.9583	2.48569	-2.914	6.83028	5.401	39	*
7	IA	3	26	-1.2199	2.02606	-5.191	2.75117	-3.070	22	*
7	MO	4	39	0.9964	4.46941	-7.764	9.75646	1.392	33	
7	MO	5	40	-1.2091	2.48390	-6.078	3.65931	-3.079	34	*
9	AZ	300	38	-0.0106	4.48935	-8.810	8.78851	-0.015	32	

POLLUTANT =PB

REGION	STATE	REPORTING ORGANIZATION	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
2	NJ	1	18	1.3677	8.2679	-14.837	17.5728	0.70181	14	
2	NY	1	17	-2.1171	11.6085	-24.870	20.6356	-0.75197	13	
3	PA	1	42	-0.9861	6.4615	-13.651	11.6784	-0.98906	38	
4	TN	3	34	2.3957	2.9881	-3.461	8.2523	4.67500	28	*

POLLUTANT =PM10

REGION	STATE	REPORTING ORGANIZATION	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	VT	1	49	9.75967	9.9311	-9.705	29.2246	6.87918	43	*
3	PA	2	43	1.75604	4.6118	-7.283	10.7952	2.49689	38	*
4	AL	12	49	0.41986	4.3734	-8.152	8.9917	0.67202	45	
7	IA	3	46	9.77996	14.1321	-17.919	37.4789	4.69364	40	*

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	ME	110	51	-2.9306	4.95548	-12.643	6.7821	-4.2234	43	*
1	ME	113	62	-1.4188	2.96614	-7.232	4.3948	-3.7664	56	*
2	VQ	2	64	-3.3427	4.21115	-11.597	4.9111	-6.3503	57	*
3	VA	815	54	0.1945	2.61108	-4.923	5.3123	0.5475	46	
4	FL	4	30	-0.7030	5.13850	-10.774	9.3685	-0.7493	26	
4	FL	7	80	-5.3178	6.80744	-18.660	8.0248	-6.9870	72	*
4	KY	2	30	-1.3407	4.86460	-10.875	8.1939	-1.5096	24	
4	SC	1	46	-0.3526	7.13568	-14.338	13.6334	-0.3351	37	
5	IN	8	73	-1.8566	2.60401	-6.960	3.2472	-6.0917	61	*
5	OH	10	58	-2.3907	2.83097	-7.939	3.1580	-6.4314	50	*
5	OH	12	44	-0.4759	4.38921	-9.079	8.1270	-0.7192	38	
5	OH	13	20	-0.3790	3.85552	-7.936	7.1778	-0.4396	16	
5	OH	14	54	0.9889	3.24645	-5.374	7.3519	2.2384	46	*
5	OH	16	40	-1.1508	3.60760	-8.222	5.9201	-2.0175	34	
6	AR	1	20	-6.0214	4.64209	-15.120	3.0771	-5.8009	16	*
6	OK	103	36	-0.9260	2.67475	-6.168	4.3165	-2.0771	30	*
7	IA	2	71	-0.1113	4.21646	-8.376	8.1530	-0.2224	58	
7	MO	5	40	0.3791	7.63864	-14.593	15.3509	0.3139	34	

TABLE C-1B. REPORTING ORGANIZATIONS WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS SITES AND QUARTERS

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
9	NV	200	44	-0.2029	2.64087	-5.379	4.97322	-0.50963	40	

POLLUTANT =TSP

REGION	STATE	REPORTING ORGANIZATION	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	MD	3	54	1.7430	2.34375	-2.851	6.3368	5.4649	50	*
3	WV	1	49	4.4903	3.03154	-1.451	10.4321	10.3684	45	*
4	AL	12	64	2.7502	4.60472	-6.275	11.7755	4.7781	60	*
4	FL	3	97	1.3306	5.33212	-9.120	11.7816	2.4577	89	*
4	FL	7	76	-1.2246	4.29004	-9.633	7.1839	-2.4885	70	*
4	FL	11	48	-1.6454	5.02146	-11.487	8.1967	-2.2702	43	*
4	FL	12	57	3.4100	3.35985	-3.175	9.9953	7.6625	53	*
4	FL	17	83	-0.8989	4.26603	-9.260	7.4625	-1.9197	77	
4	NC	4	52	-0.7752	6.62279	-13.756	12.2054	-0.8441	48	
4	TN	3	56	-0.0944	2.49211	-4.979	4.7901	-0.2835	52	
5	IL	2	80	-0.6936	3.22679	-7.018	5.6309	-1.9227	74	
5	IN	9	76	0.4714	2.87847	-5.170	6.1132	1.4276	68	
5	OH	4	52	1.1473	3.51056	-5.733	8.0280	2.3567	48	*
5	OH	5	44	-2.3472	3.86885	-9.930	5.2358	-4.0243	40	*
5	OH	12	82	4.8263	9.67250	-14.132	23.7844	4.5184	76	*
5	OH	14	75	-3.7449	8.26379	-19.942	12.4522	-3.9245	69	*
5	OH	15	53	0.4690	2.17014	-3.784	4.7224	1.5733	49	
5	OH	16	87	-0.8660	3.35501	-7.442	5.7098	-2.4075	81	*
6	AR	1	42	-2.1196	4.71344	-11.358	7.1187	-2.9144	38	*
6	TX	4	55	1.8659	3.94036	-5.857	9.5890	3.5118	51	*
6	TX	7	56	-0.8337	1.93696	-4.630	2.9627	-3.2211	52	*
7	MO	5	63	-1.0326	2.30042	-5.541	3.4763	-3.5627	57	*
7	NE	1	42	-2.9463	9.08468	-20.752	14.8597	-2.1018	38	*
8	UT	1	49	2.0098	6.44716	-10.627	14.6462	2.1821	45	*
9	AZ	100	47	1.5463	6.22390	-10.653	13.7452	1.7033	43	

TABLE C-2A. STATES WITH HOMOGENEOUS VARIANCE AND EQUAL MEANS ACROSS REPORTING ORGANIZATIONS BY QUARTER

TABLE C-2A. STATES WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS REPORTING ORGANIZATIONS BY QUARTER

POLLUTANT =CO

REGION	STATE	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	WV	1	31	-1.3971	7.12197	-15.356	12.5620	-1.0922	27	
5	IN	1	28	-0.7691	3.63864	-7.901	6.3626	-1.1185	23	
6	NM	3	15	-5.1397	3.54779	-12.093	1.8140	-5.6108	6	*
7	MO	4	33	4.0304	5.14699	-6.058	14.1185	4.4983	28	*
7	NE	1	20	0.8526	1.53630	-2.159	3.8637	2.4818	16	*
7	NE	2	20	1.4180	1.96095	-2.425	5.2614	3.2339	16	*
9	AZ	2	42	-0.2365	2.33332	-4.810	4.3368	-0.6569	30	

POLLUTANT =NO2

REGION	STATE	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	PA	1	43	0.4600	5.06023	-9.458	10.3780	0.5961	38	
3	PA	2	38	-0.4416	6.20955	-12.612	11.7291	-0.4384	33	
3	PA	3	40	-2.4883	7.16115	-16.524	11.5475	-2.1976	35	*
3	WV	4	31	0.0093	5.97215	-11.696	11.7147	0.0086	26	
4	FL	4	13	7.6559	6.78147	-5.636	20.9476	4.0705	9	*
5	OH	2	33	-2.4063	4.83337	-11.880	7.0671	-2.8599	29	*
5	OH	3	38	2.9023	5.24062	-7.369	13.1739	3.4139	34	*
6	OK	1	29	0.3830	3.63195	-6.736	7.5016	0.5679	24	
7	MO	4	26	-0.5362	4.36813	-9.098	8.0254	-0.6259	22	

POLLUTANT =O3

REGION	STATE	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	PA	4	31	-0.5424	4.49983	-9.362	8.27728	-0.6711	24	
4	AL	1	10	0.0627	4.33288	-8.430	8.55519	0.0458	5	
4	AL	4	24	-2.7108	6.47782	-15.407	9.98572	-2.0501	18	
4	NC	4	20	-1.8294	3.76022	-9.199	5.54068	-2.1757	16	*
4	TN	1	22	1.0350	2.69271	-4.243	6.31274	1.8029	18	
4	TN	2	27	1.3053	3.20853	-4.983	7.59399	2.1138	23	*
4	TN	3	28	1.2640	2.15544	-2.961	5.48870	3.1032	24	*
4	TN	4	28	-0.3603	3.13614	-6.507	5.78652	-0.6080	21	
5	IN	3	71	-0.5091	3.38338	-7.141	6.12229	-1.2680	60	
5	OH	4	26	-0.4912	2.50961	-5.410	4.42763	-0.9980	17	
7	IA	1	27	0.3758	2.21389	-3.963	4.71505	0.8821	23	
7	IA	4	28	0.3125	3.35780	-6.269	6.89375	0.4924	24	
9	AZ	4	60	-1.1290	3.10263	-7.210	4.95220	-2.8185	49	*

POLLUTANT =PM10

REGION	STATE	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	PA	3	45	-1.3039	3.63631	-8.4311	5.82327	-2.4054	41	*

TABLE C-2A. STATES WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS REPORTING ORGANIZATIONS BY QUARTER

POLLUTANT =SO2

REGION	STATE	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	ME	3	44	-2.4587	3.59010	-9.495	4.57787	-4.5429	39	*
1	ME	4	44	-1.2461	2.94308	-7.015	4.52229	-2.8086	39	*
3	VA	3	69	-1.6644	4.07041	-9.642	6.31357	-3.3967	58	*
4	KY	2	49	-4.4232	4.76239	-13.757	4.91112	-6.5014	40	*
6	OK	2	39	-0.3862	2.76489	-5.805	5.03299	-0.8723	33	
7	IA	2	54	-2.5584	4.85179	-12.068	6.95111	-3.8749	45	*

POLLUTANT =TSP

REGION	STATE	QUARTER	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
4	AL	1	90	-1.2371	6.99748	-14.952	12.4779	-1.6772	84	
4	NC	2	57	-0.4441	5.48337	-11.192	10.3033	-0.6115	53	
6	AR	1	34	-3.8686	5.01374	-13.696	5.9584	-4.4991	30	*
7	MO	3	21	-1.5140	1.92289	-5.283	2.2549	-3.6081	17	*
9	AZ	1	39	1.1104	6.08447	-10.815	13.0360	1.1397	35	

TABLE C-2B. STATES WITH HOMOGENEOUS VARIANCE AND EQUAL MEANS ACROSS REPORTING ORGANIZATIONS AND QUARTERS

TABLE C-2B. STATES WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS REPORTING ORGANIZATIONS AND QUARTERS 3

POLLUTANT =CO

REGION	STATE	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
7	NE	40	1.13528	1.76147	-2.3172	4.58776	4.07622	32	*

POLLUTANT =NO2

REGION	STATE	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	PA	121	-0.79781	6.17384	-12.899	11.3029	-1.4215	106	

POLLUTANT =O3

REGION	STATE	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
4	AL	34	-1.8951	6.07628	-13.805	10.0145	-1.8185	23	

TABLE C-3. SITES WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS QUARTERS

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	SITE	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	CT	1	90010004	13	-0.9423	3.93139	-8.648	6.7632	-0.864	11	
1	CT	1	90010020	13	-1.1919	2.67735	-6.439	4.0557	-1.605	11	
1	CT	1	90030013	13	-0.3092	5.48226	-11.054	10.4360	-0.203	11	
1	CT	1	90030017	13	-1.5091	4.16439	-9.671	6.6531	-1.307	11	
1	CT	1	90090019	15	-1.5906	3.81880	-9.075	5.8942	-1.613	13	
1	ME	1	230050018	19	-0.2830	1.40658	-3.040	2.4739	-0.877	16	
1	MA	1	250132007	31	0.0166	1.51224	-2.947	2.9806	0.061	27	
1	MA	1	250250002	34	-0.1684	1.69028	-3.481	3.1445	-0.581	30	
1	MA	1	250250021	26	1.3434	2.15137	-2.873	5.5601	3.184	22	*
1	MA	1	250270020	33	0.9270	1.93449	-2.865	4.7186	2.753	29	*
1	RI	1	440070015	52	4.2498	2.86933	-1.374	9.8737	10.680	48	*
2	NJ	1	340030003	25	1.0909	2.71794	-4.236	6.4181	2.007	21	
2	NJ	1	340035001	26	0.1538	3.62173	-6.945	7.2524	0.217	22	
2	NJ	1	340070003	32	0.6885	3.12375	-5.434	6.8111	1.247	28	
2	NJ	1	340171002	25	-2.0622	4.19246	-10.279	6.1550	-2.459	21	*
2	NJ	1	340210006	26	-2.0604	2.49175	-6.944	2.8234	-4.216	22	*
2	NJ	1	340252001	21	-0.5216	3.77876	-7.928	6.8848	-0.633	17	
2	NJ	1	340270003	29	0.3065	1.99303	-3.600	4.2129	0.828	25	
2	NJ	1	340390003	26	-0.9922	4.59009	-9.989	8.0043	-1.102	22	
2	NY	1	360290005	21	-1.7071	2.34314	-6.300	2.8854	-3.339	17	*
2	NY	1	360470071	47	0.5710	3.37647	-6.047	7.1889	1.159	43	
2	NY	1	360470076	38	2.8377	2.20912	-1.492	7.1676	7.918	34	*
2	NY	1	360556001	33	-0.3687	1.79008	-3.877	3.1399	-1.183	29	
2	NY	1	360590005	29	0.3288	1.26620	-2.153	2.8106	1.399	25	
2	NY	1	360610062	25	-0.5181	2.06343	-4.562	3.5263	-1.255	21	
2	NY	1	360610075	16	-0.6641	3.36567	-7.261	5.9326	-0.789	12	
2	NY	1	360610082	26	-2.5483	3.44682	-9.304	4.2074	-3.770	23	*
2	NY	1	360632006	21	0.8675	4.03324	-7.038	8.7726	0.986	17	
2	NY	1	360670017	50	-0.8719	1.14420	-3.115	1.3707	-5.388	46	*
2	NY	1	360930003	19	-1.1875	2.60483	-6.293	3.9180	-1.987	15	
3	DC	1	110010023	26	-0.4403	1.71379	-3.799	2.9187	-1.310	22	
3	MD	1	240311008	48	-0.1547	1.60040	-3.291	2.9821	-0.670	44	
3	MD	1	240330001	52	-0.4559	1.71345	-3.814	2.9025	-1.919	48	
3	MD	1	245100034	33	0.0856	1.09054	-2.052	2.2231	0.451	29	
3	MD	5	240053001	58	3.4642	4.75054	-5.847	12.7753	5.554	54	*
3	PA	1	420070014	24	-2.5851	2.47394	-7.434	2.2638	-5.119	20	*
3	PA	1	420110009	27	-0.8274	2.64837	-6.018	4.3634	-1.623	23	
3	PA	1	420130801	24	2.4453	2.70243	-2.852	7.7420	4.433	20	*
3	PA	1	420170012	25	0.0378	3.11773	-6.073	6.1486	0.061	21	
3	PA	1	420210011	25	-1.1455	2.57928	-6.201	3.9099	-2.221	21	*
3	PA	1	420430101	26	5.2007	4.07582	-2.788	13.1893	6.506	22	*
3	PA	1	420430401	26	3.4539	2.44854	-1.345	8.2530	7.193	22	*
3	PA	1	420450002	26	-3.4744	3.18677	-9.720	2.7717	-5.559	22	*
3	PA	1	420490100	24	3.2119	2.72910	-2.137	8.5610	5.766	20	*
3	PA	1	420710007	27	-2.8001	1.26179	-5.273	-0.3270	-11.531	23	*
3	PA	1	420730015	28	-1.4833	2.37527	-6.139	3.1723	-3.304	24	*
3	PA	1	420770100	27	0.5584	3.66876	-6.632	7.7491	0.791	23	
3	PA	1	421330008	26	-3.6989	1.97608	-7.572	0.1743	-9.544	22	*
3	PA	2	420030052	31	2.2160	2.91589	-3.499	7.9312	4.231	29	*
3	PA	3	421010004	26	-0.6814	3.72581	-7.984	6.6212	-0.932	22	
3	PA	3	421010027	22	-5.0062	4.40303	-13.636	3.6237	-5.333	18	*
3	PA	3	421010029	26	1.4795	3.67971	-5.733	8.6917	2.050	22	
3	PA	3	421010046	27	-0.2099	5.40769	-10.809	10.3892	-0.202	23	

TABLE C-3. SITES WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS QUARTERS

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	SITE	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	PA	3	421010047	26	-1.3905	5.4366	-12.046	9.2653	-1.304	22	
3	PA	3	421010051	26	-0.2052	4.4276	-8.883	8.4730	-0.236	22	
3	VA	1	510130020	33	2.4905	2.0818	-1.590	6.5709	6.872	29	*
3	VA	1	515100009	28	-1.0716	1.8751	-4.747	2.6035	-3.024	24	*
3	VA	1	517000006	14	1.5844	1.8229	-1.988	5.1572	3.252	12	*
3	VA	1	517100019	20	-0.0971	1.2837	-2.613	2.4190	-0.338	16	
3	VA	1	518100007	26	1.6145	2.4568	-3.201	6.4298	3.351	22	*
3	VA	3	510590018	20	-0.6863	2.1851	-4.969	3.5965	-1.405	16	
3	VA	3	510591004	20	-0.7489	1.5542	-3.795	2.2973	-2.155	16	*
3	VA	3	510595001	11	-1.5191	4.0126	-9.384	6.3457	-1.256	7	
3	VA	3	516000005	18	-1.0874	1.5661	-4.157	1.9823	-2.946	14	*
3	WV	1	540250001	18	5.2664	8.6705	-11.728	22.2606	2.577	14	*
3	WV	1	540390004	24	-6.9760	7.7287	-22.124	8.1723	-4.422	20	*
4	AL	12	10730025	23	-0.7729	7.0663	-14.623	13.0770	-0.525	19	
4	AL	12	10730028	23	-1.8357	4.0628	-9.799	6.1274	-2.167	19	*
4	AL	12	10730032	23	0.3382	2.3570	-4.282	4.9579	0.688	19	
4	AL	12	10730033	23	4.9758	4.4675	-3.781	13.7322	5.341	19	*
4	AL	12	10731003	23	-2.1256	6.2550	-14.385	10.1342	-1.630	19	
4	FL	12	120571052	28	0.2215	3.2295	-6.108	6.5513	0.363	24	
4	FL	12	120571060	30	-3.1375	4.9696	-12.878	6.6029	-3.458	26	*
4	FL	13	121030018	30	-1.6105	1.9748	-5.481	2.2602	-4.467	26	*
4	FL	13	121030024	26	1.0355	2.1858	-3.249	5.3197	2.416	22	*
4	FL	13	121031005	24	-2.1073	1.7241	-5.487	1.2720	-5.988	20	*
4	FL	17	120110008	28	-4.0004	1.6785	-7.290	-0.7106	-12.612	24	*
4	FL	17	120111003	27	-2.6627	2.0361	-6.654	1.3281	-6.795	23	*
4	FL	17	120112004	28	-0.1037	1.2084	-2.472	2.2648	-0.454	24	
4	FL	17	120113002	21	-2.7465	2.2630	-7.182	1.6891	-5.562	18	*
4	FL	18	120251018	37	3.1885	11.3778	-19.112	25.4891	1.705	33	
4	FL	18	120251019	37	4.8099	3.2162	-1.494	11.1136	9.097	33	*
4	FL	18	120254002	24	1.1746	1.8344	-2.421	4.7700	3.137	21	*
4	GA	10	131210051	32	0.1529	4.5561	-8.777	9.0829	0.190	29	
4	KY	1	210190014	22	0.9946	2.4586	-3.824	5.8135	1.897	18	
4	KY	1	210670009	25	1.6570	2.1953	-2.646	5.9597	3.774	21	*
4	KY	1	211451023	24	3.6431	2.6019	-1.457	8.7427	6.359	20	*
4	KY	2	211110045	12	-2.6771	2.6488	-7.869	2.5145	-3.501	9	*
4	KY	2	211110046	18	-3.1063	2.3507	-7.714	1.5011	-5.606	15	*
4	KY	2	211111019	23	-1.8186	2.7593	-7.227	3.5895	-3.161	19	*
4	NC	1	370630010	19	1.3282	4.7160	-7.915	10.5716	1.228	16	
4	NC	2	370670018	46	-2.7295	2.7777	-8.174	2.7148	-6.665	42	*
4	NC	2	370670019	45	0.7435	4.2235	-7.535	9.0216	1.181	41	
4	NC	3	371190029	26	-3.3204	2.1923	-7.617	0.9765	-7.723	22	*
4	NC	3	371190031	26	-1.2799	2.8467	-6.859	4.2996	-2.293	22	*
4	NC	3	371190032	27	-0.3619	2.6224	-5.502	4.7780	-0.717	23	
4	NC	3	371190035	26	-2.3585	2.0503	-6.377	1.6601	-5.866	22	*
4	SC	1	450190005	19	1.6057	3.7771	-5.797	9.0087	1.853	16	
4	TN	2	471570021	27	-0.8839	3.2023	-7.160	5.3926	-1.434	23	
4	TN	2	471570024	22	0.6964	1.5729	-2.387	3.7794	2.077	19	
4	TN	2	471570034	24	-0.1887	1.1054	-2.355	1.9780	-0.836	20	
4	TN	2	471570035	31	0.7898	1.3323	-1.821	3.4011	3.301	27	*
4	TN	2	471570036	33	1.7137	4.2086	-6.535	9.9627	2.339	29	*
4	TN	3	470370021	18	-1.2334	1.5119	-4.197	1.7299	-3.461	15	*
4	TN	3	470370028	18	-1.9933	1.5530	-5.037	1.0505	-5.446	15	*
4	TN	3	470370031	18	-2.6773	1.5591	-5.733	0.3784	-7.286	15	*

TABLE C-3. SITES WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS QUARTERS

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	SITE	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
5	IL	1	170313101	45	1.7607	6.29221	-10.572	14.0934	1.8771	41	
5	IL	1	171190017	47	-0.8590	3.70952	-8.130	6.4116	-1.5876	43	
5	IL	1	171630010	38	-0.9066	2.56054	-5.925	4.1121	-2.1826	34	*
5	IL	1	171670008	35	-0.6631	5.07557	-10.611	9.2850	-0.7729	31	
5	IL	3	170310037	34	-0.3963	3.32161	-6.907	6.1140	-0.6957	30	
5	IL	3	170311002	42	0.0949	2.86199	-5.515	5.7044	0.2148	38	
5	IN	1	180970070	22	-2.1994	4.63765	-11.289	6.8904	-2.2244	18	*
5	IN	1	181410009	10	-6.0101	4.08748	-14.022	2.0014	-4.6497	8	*
5	IN	1	181411008	12	-1.2583	4.92599	-10.913	8.3966	-0.8849	10	
5	IN	1	181571001	23	-1.0925	4.79014	-10.481	8.2962	-1.0938	19	
5	IN	8	180970034	25	-0.4977	0.64823	-1.768	0.7729	-3.8387	21	*
5	IN	8	180970061	23	1.1840	2.08212	-2.897	5.2649	2.7271	19	*
5	IN	8	180970068	25	-1.1760	1.35751	-3.837	1.4847	-4.3314	21	*
5	IN	100	180891016	25	2.1557	5.01601	-7.676	11.9871	2.1488	21	*
5	MI	1	260991003	26	-0.1436	3.48675	-6.978	6.6904	-0.2100	22	
5	MI	1	261210024	28	1.8022	2.32955	-2.764	6.3681	4.0936	24	*
5	MI	1	261450002	41	-1.2505	2.06231	-5.293	2.7916	-3.8827	37	*
5	MI	2	261630001	28	-0.9659	3.47906	-7.785	5.8530	-1.4691	24	
5	MI	2	261630014	25	-2.3864	3.07509	-8.414	3.6408	-3.8802	21	*
5	MI	2	261630016	25	-0.1136	4.11220	-8.174	7.9463	-0.1382	21	
5	MI	2	261630021	24	-1.3925	6.31766	-13.775	10.9901	-1.0798	20	
5	MI	2	261632002	17	-1.2366	5.41405	-11.848	9.3749	-0.9418	13	
5	MN	1	271230048	43	0.1676	3.32741	-6.354	6.6893	0.3303	39	
5	MN	1	271230051	16	-1.8928	4.66668	-11.039	7.2539	-1.6224	14	
5	MN	1	271410025	21	0.4762	3.52369	-6.430	7.3826	0.6193	19	
5	OH	1	390490014	18	0.7540	6.82157	-12.616	14.1242	0.4689	15	
5	OH	6	391530015	25	0.0522	2.84457	-5.523	5.6276	0.0918	21	
5	OH	6	391530020	26	-0.7158	5.00354	-10.523	9.0912	-0.7294	22	
5	OH	7	391511001	34	2.0854	2.74713	-3.299	7.4698	4.4265	31	*
5	OH	9	390350043	35	3.7143	2.09345	-0.389	7.8174	10.4966	31	*
5	OH	9	390350048	21	3.2289	2.65326	-1.971	8.4293	5.5768	18	*
5	OH	10	391130003	24	0.6961	3.69332	-6.543	7.9350	0.9234	20	
5	OH	10	391130028	26	-1.5115	2.53797	-6.486	3.4629	-3.0367	22	*
5	OH	12	390851004	22	0.7020	3.53624	-6.229	7.6330	0.9311	18	
5	WI	1	550250027	29	3.1201	5.30846	-7.284	13.5247	3.1652	25	*
5	WI	1	550790044	27	-1.1848	2.00918	-5.123	2.7532	-3.0642	23	*
5	WI	1	550790047	27	-2.5342	4.23974	-10.844	5.7757	-3.1058	23	*
5	WI	1	550790048	26	0.4178	2.12063	-3.739	4.5742	1.0045	22	
5	WI	1	551010017	20	4.3844	5.40333	-6.206	14.9749	3.6288	17	*
5	WI	1	551330017	25	1.5980	4.83772	-7.884	11.0799	1.6516	21	
6	LA	1	220330004	24	0.4839	1.96275	-3.363	4.3309	1.2078	20	
6	LA	1	220710017	26	-1.4062	2.67257	-6.644	3.8321	-2.6828	22	*
6	NM	1	350130011	14	4.5320	3.19574	-1.732	10.7957	5.3062	11	*
6	NM	1	350131012	14	3.7285	2.78401	-1.728	9.1852	5.0110	11	*
6	OK	101	400270044	17	-1.1467	1.39716	-3.885	1.5917	-3.3841	14	*
6	OK	101	401090033	19	-1.1641	2.74488	-6.544	4.2158	-1.8487	16	
6	OK	102	401090018	9	1.0204	3.12756	-5.110	7.1504	0.9788	7	
6	OK	102	401090047	19	5.3545	3.48409	-1.474	12.1833	6.6989	17	*
6	OK	103	401430126	18	-3.6213	1.99273	-7.527	0.2845	-7.7099	15	*
6	OK	103	401430191	18	2.0982	2.30314	-2.416	6.6123	3.8651	15	*
6	TX	1	482010024	98	-1.1841	4.60437	-10.209	7.8405	-2.5458	94	*
6	TX	1	484391002	182	0.8693	2.61527	-4.257	5.9952	4.4842	178	*
6	TX	2	481130053	26	-0.5700	4.87022	-10.116	8.9756	-0.5968	23	

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POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	SITE	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
6	TX	2	481130055	22	0.549	3.01712	-5.364	6.4627	0.8536	19	
6	TX	2	481130069	18	-1.288	3.40995	-7.972	5.3951	-1.6031	15	
6	TX	3	481410002	19	-1.381	2.51781	-6.316	3.5538	-2.3909	16	*
6	TX	6	482010047	18	-2.391	3.55545	-9.360	4.5775	-2.8533	15	*
6	TX	6	482011035	15	-0.808	2.60724	-5.919	4.3019	-1.2007	12	
6	TX	6	482011037	19	-2.560	1.85408	-6.194	1.0738	-6.0191	16	*
7	IA	1	191530052	37	-1.681	2.30648	-6.201	2.8402	-4.4320	33	*
7	IA	1	191530060	38	0.877	4.02580	-7.013	8.7680	1.3435	34	
7	KS	1	201731014	24	-12.345	7.41797	-26.884	2.1942	-8.1529	20	*
7	KS	1	202090001	25	1.470	2.71168	-3.844	6.7853	2.7112	21	*
7	MO	2	291890001	26	0.334	1.49117	-2.588	3.2571	1.1436	22	
7	MO	2	291890006	26	2.478	1.75414	-0.960	5.9166	7.2046	22	*
7	MO	2	291895001	26	1.825	2.47418	-3.025	6.6739	3.7602	22	*
7	MO	2	291897001	25	2.121	2.68693	-3.145	7.3875	3.9471	21	*
7	MO	3	295100080	30	4.327	5.70517	-6.855	15.5093	4.1543	26	*
7	MO	3	295100083	30	6.920	5.85055	-4.547	18.3869	6.4783	26	*
7	MO	4	290470009	26	2.531	4.13346	-5.570	10.6327	3.1224	22	*
7	MO	4	290950031	25	-0.233	3.98145	-8.037	7.5702	-0.2932	21	
7	MO	4	290950032	26	1.193	1.69469	-2.129	4.5146	3.5895	22	*
7	MO	5	290770032	20	-1.879	4.96604	-11.612	7.8549	-1.6918	17	
7	NE	2	311090018	22	2.245	1.36072	-0.422	4.9124	7.7400	18	*
7	NE	3	310550037	23	0.062	1.81226	-3.490	3.6145	0.1654	19	
8	CO	1	80050002	25	3.214	3.61284	-3.868	10.2948	4.4475	21	*
8	CO	1	80310002	24	0.614	2.93260	-5.134	6.3618	1.0256	20	
8	CO	1	80310013	25	3.142	3.68804	-4.087	10.3705	4.2596	21	*
8	CO	1	80310014	25	1.989	5.52251	-8.835	12.8133	1.8010	21	
8	CO	1	80410004	26	2.520	4.88136	-7.048	12.0874	2.6323	22	*
8	CO	1	80410006	26	-2.214	4.65888	-11.346	6.9170	-2.4236	22	*
8	CO	1	80590002	25	2.094	3.22198	-4.221	8.4090	3.2494	21	*
8	CO	1	80691004	27	0.816	3.33786	-5.726	7.3584	1.2706	23	
8	CO	1	80770013	22	0.723	4.34124	-7.786	9.2318	0.7811	18	
8	CO	1	81230007	18	2.336	2.88889	-3.326	7.9986	3.4313	14	*
8	MT	1	300131023	36	-0.094	5.30179	-10.485	10.2979	-0.1060	33	
8	UT	1	490350003	37	1.290	1.78760	-2.214	4.7937	4.3895	34	*
8	UT	1	490350011	40	-0.024	2.05217	-4.046	3.9982	-0.0742	37	
8	UT	1	490490002	39	-0.849	1.95335	-4.678	2.9792	-2.7153	36	*
8	UT	1	490570005	41	-0.195	1.61220	-3.355	2.9644	-0.7764	38	
8	UT	1	490571001	16	1.278	3.92442	-6.413	8.9703	1.3030	14	
9	AZ	100	40051004	12	0.444	1.20826	-1.924	2.8123	1.2732	9	
9	AZ	200	40130013	15	-4.179	2.19991	-8.491	0.1326	-7.3576	11	*
9	AZ	200	40130019	14	1.152	2.28942	-3.335	5.6393	1.8829	11	
9	AZ	200	40131003	16	-3.217	4.65797	-12.347	5.9125	-2.7626	12	*
9	AZ	200	40131004	12	-1.434	2.67019	-6.667	3.7999	-1.8600	9	
9	AZ	200	40132001	15	-2.294	2.39122	-6.981	2.3929	-3.7154	11	*
9	AZ	200	40132004	15	1.649	5.00248	-8.156	11.4536	1.2765	11	
9	AZ	200	40133002	20	-0.376	1.39718	-3.115	2.3621	-1.2046	16	
9	AZ	200	40133003	15	1.362	1.85299	-2.270	4.9939	2.8468	11	*
9	AZ	300	40190002	18	1.703	3.90375	-5.949	9.3541	1.8506	15	
9	AZ	300	40191011	14	0.455	1.46496	-2.416	3.3265	1.1625	11	
9	AZ	300	40191014	23	-0.084	1.81018	-3.632	3.4642	-0.2218	19	
9	CA	1	60070005	16	2.834	2.01867	-1.122	6.7909	5.6162	12	*
9	CA	1	60170009	15	3.263	3.53269	-3.661	10.1868	3.5770	12	*
9	CA	1	60190005	23	-2.666	3.80419	-10.122	4.7904	-3.3607	19	*

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POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	SITE	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
9	CA	1	60290232	27	0.8084	3.0302	-5.131	6.7476	1.386	23	
9	CA	1	60531002	27	2.0441	1.7898	-1.464	5.5521	5.935	23	*
9	CA	1	60670001	15	3.5697	4.0767	-4.421	11.5601	3.391	12	*
9	CA	1	60670002	13	-9.3531	6.4981	-22.089	3.3831	-5.190	11	*
9	CA	1	60670006	13	12.5224	2.5212	7.581	17.4639	17.908	11	*
9	CA	1	60670007	13	-1.2821	3.8471	-8.822	6.2582	-1.202	11	
9	CA	1	60710001	8	2.8750	7.7395	-12.294	18.0444	1.051	5	
9	CA	1	60714001	18	4.6626	5.9825	-7.063	16.3883	3.307	15	*
9	CA	1	60771002	16	2.1042	2.5400	-2.874	7.0826	3.314	13	*
9	CA	1	60790004	26	5.0637	2.3546	0.449	9.6788	10.966	22	*
9	CA	1	60830009	18	6.2755	19.2026	-31.362	43.9127	1.387	14	
9	CA	1	60990005	22	6.2576	3.8950	-1.377	13.8918	7.536	18	*
9	CA	1	61072002	18	7.0907	6.6442	-5.932	20.1133	4.528	14	*
9	CA	1	61113001	18	0.6829	5.1138	-9.340	10.7058	0.567	16	
9	CA	1	61131002	26	0.5072	2.5285	-4.449	5.4631	1.023	22	
9	CA	4	60010003	25	1.0204	1.1447	-1.223	3.2641	4.457	21	*
9	CA	4	60010005	24	0.2888	1.8808	-3.397	3.9751	0.752	20	
9	CA	4	60011001	26	2.3940	2.5253	-2.555	7.3436	4.834	22	*
9	CA	4	60130002	26	1.0581	1.4989	-1.880	3.9960	3.599	22	*
9	CA	4	60130003	26	0.6316	1.7715	-2.841	4.1037	1.818	22	
9	CA	4	60133001	26	2.7865	2.0527	-1.237	6.8097	6.922	22	*
9	CA	4	60410001	26	1.0082	1.8303	-2.579	4.5957	2.809	22	*
9	CA	4	60550003	26	-1.7722	1.5069	-4.726	1.1813	-5.997	22	*
9	CA	4	60750003	26	2.5626	1.7196	-0.808	5.9331	7.59[illegible]	22	*
9	CA	4	60850002	26	1.0870	1.2282	-1.320	3.4943	4.513	22	*
9	CA	4	60850004	26	-2.4510	2.3823	-7.120	2.2184	-5.246	22	*
9	CA	4	60950004	26	-0.5769	1.6323	-3.776	2.6224	-1.802	22	
9	CA	4	60970003	26	2.4840	1.4775	-0.412	5.3799	8.572	22	*
9	CA	36	60730003	26	-0.2261	2.7412	-5.599	5.1467	-0.421	22	
9	CA	36	60730005	26	-2.5873	2.7268	-7.932	2.7572	-4.838	22	*
9	CA	36	60730007	25	-2.1698	2.8370	-7.730	3.3907	-3.824	21	*
9	CA	36	60731002	25	-1.1637	4.0202	-9.043	6.7159	-1.447	21	
9	CA	61	60370113	20	0.8607	5.8862	-10.676	12.3977	0.654	17	
9	CA	61	60371103	20	6.0931	2.4274	1.335	10.8507	11.226	17	*
9	CA	61	60371301	20	7.0725	3.3023	0.600	13.5449	9.578	17	*
9	CA	61	60371601	20	8.8877	2.9209	3.163	14.6128	13.608	17	*
9	CA	61	60371701	20	5.5968	2.1096	1.462	9.7316	11.865	17	*
9	CA	61	60372005	20	0.2141	6.3651	-12.262	12.6898	0.150	17	
9	CA	61	60372401	20	-1.0168	3.1518	-7.194	5.1607	-1.443	17	
9	CA	61	60375001	20	8.8902	2.8573	3.290	14.4905	13.915	17	*
9	CA	61	60377001	19	6.1952	1.7419	2.781	9.6094	15.503	16	*
9	CA	61	60595001	18	6.6288	4.2470	-1.695	14.9530	6.622	15	*
9	CA	61	60655001	18	6.9440	2.3230	2.391	11.4971	12.682	15	*
9	CA	61	60658001	18	5.7249	5.2982	-4.660	16.1093	4.584	15	*
9	CA	61	60711004	18	6.2269	3.5219	-0.676	13.1299	7.501	15	*
9	CA	61	60712002	20	12.0611	4.6820	2.884	21.2378	11.521	17	*
10	ID	1	160010011	37	0.9456	1.2599	-1.524	3.4149	4.565	33	*
10	OR	1	410390013	24	2.0833	3.3800	-4.541	8.7081	3.020	22	*
10	OR	1	410510075	53	-0.7274	2.5710	-5.767	4.3117	-2.060	49	*
10	OR	1	410510078	53	1.4057	2.1073	-2.725	5.5361	4.856	49	*
10	OR	1	410511002	46	0.6079	2.5507	-4.391	5.6073	1.616	42	
10	WA	1	530330074	41	-2.2139	1.7503	-5.644	1.2166	-8.099	37	*
10	WA	1	530330077	45	-4.3465	2.5123	-9.271	0.5776	-11.606	41	*

TABLE C-3. SITES WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS QUARTERS

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	SITE	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
10	WA	1	530331003	46	1.1736	1.58001	-1.923	4.27042	5.0378	42	*
10	WA	1	530630027	40	3.5518	2.99381	-2.316	9.41962	7.5033	36	*
10	WA	1	530630028	40	2.0161	1.29580	-0.524	4.55589	9.8404	36	*
10	WA	1	530630032	34	-4.1768	3.45156	-10.942	2.58829	-7.0561	30	*
10	WA	1	530630040	37	-2.8406	2.47778	-7.697	2.01585	-6.9734	33	*
10	WA	1	530770006	9	-0.8945	0.57146	-2.015	0.22551	-4.6961	6	*
10	WA	1	530770010	19	-2.7853	1.67724	-6.073	0.50214	-7.2385	16	*

APPENDIX D

PROBABILITY LIMITS FOR ACCURACY DATA

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENEOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL 1

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	ME	1	1	4	-3.3949	4.3642	-11.949	5.1590	-1.556	2	
1	ME	1	2	4	-4.4565	4.5222	-13.320	4.4071	-1.971	2	
1	ME	1	3	4	-3.8033	3.6352	-10.928	3.3217	-2.092	2	
1	MA	1	1	15	1.7158	2.5454	-3.273	6.7048	2.611	11	*
1	MA	1	2	15	1.6365	2.3174	-2.906	6.1786	2.735	11	*
1	MA	1	3	8	-0.8907	3.3296	-7.417	5.6354	-0.757	5	
1	NH	1	2	4	-2.7244	1.3215	-5.315	-0.1342	-4.123	2	
1	NH	1	3	4	-2.7199	2.1622	-6.958	1.5180	-2.516	2	
1	RI	1	1	13	3.9050	2.4684	-0.933	8.7430	5.704	9	*
1	RI	1	2	13	1.2629	1.2290	-1.146	3.6717	3.705	9	*
1	VT	1	1	4	-2.8504	4.5852	-11.837	6.1366	-1.243	2	
1	VT	1	2	4	-1.7449	1.8129	-5.298	1.8084	-1.925	2	
1	VT	1	3	4	-1.8230	0.2997	-2.410	-1.2355	-12.164	2	*
2	NJ	1	1	27	-0.6241	5.7256	-11.846	10.5981	-0.566	23	
2	NJ	1	2	14	1.5610	6.9884	-12.136	15.2583	0.836	11	
2	NJ	1	3	17	1.4710	2.9608	-4.332	7.2741	2.048	14	
2	NY	1	2	53	0.5364	2.4094	-4.186	5.2589	1.621	49	
3	MD	1	1	15	0.9676	5.3261	-9.472	11.4068	0.704	11	
3	MD	1	2	14	-0.0596	1.7020	-3.396	3.2763	-0.131	10	
3	MD	1	3	10	-0.6988	0.9999	-2.659	1.2610	-2.210	7	
3	PA	1	1	32	-2.0407	4.9413	-11.726	7.6442	-2.336	28	*
3	PA	1	2	25	-2.6529	2.8103	-8.161	2.8553	-4.720	21	*
3	PA	1	3	16	-1.1975	3.0071	-7.091	4.6965	-1.593	13	
3	PA	2	1	10	-0.3894	1.6510	-3.625	2.8465	-0.746	6	
3	PA	2	2	6	0.9198	1.2407	-1.512	3.3515	1.816	4	
3	PA	2	3	10	0.6175	1.2397	-1.812	3.0474	1.575	6	
3	PA	3	1	8	1.3341	5.5740	-9.591	12.2591	0.677	4	
3	PA	3	2	8	-0.4328	1.5601	-3.491	2.6250	-0.785	4	
3	VA	1	1	7	-3.2143	2.1041	-7.338	0.9097	-4.042	3	*
3	VA	1	2	7	-2.5714	0.5000	-3.551	-1.5914	-13.607	3	*
3	VA	1	3	7	-1.7510	0.6301	-2.986	-0.5160	-7.353	3	*
3	VA	3	2	7	-0.0994	3.3238	-6.614	6.4152	-0.079	4	
3	VA	3	3	9	0.2026	4.6466	-8.905	9.3100	0.131	6	
3	WV	1	1	8	0.4313	14.8582	-28.691	29.5534	0.082	5	
3	WV	1	2	7	-3.2156	6.7236	-16.394	9.9628	-1.265	4	
3	WV	1	3	6	-4.0343	1.7829	-7.529	-0.5398	-5.543	3	*
3	WV	2	1	8	-2.5056	7.1257	-16.472	11.4608	-0.995	4	
3	WV	2	2	8	-6.9451	2.8464	-12.524	-1.3662	-6.901	4	*
3	WV	2	3	8	-7.0699	2.1210	-11.227	-2.9128	-9.428	4	*
4	AL	12	1	17	1.7984	5.4077	-8.801	12.3976	1.371	13	
4	AL	12	2	17	0.8598	4.2067	-7.385	9.1049	0.843	13	
4	AL	12	3	17	0.6942	1.8906	-3.011	4.3997	1.514	13	
4	FL	11	1	8	-0.9201	3.0039	-6.808	4.9674	-0.866	6	
4	FL	11	2	8	0.3982	2.4176	-4.340	5.1367	0.466	6	
4	FL	11	3	8	1.9237	3.2077	-4.363	8.2107	1.696	6	
4	FL	12	1	4	-0.5007	3.0379	-6.455	5.4537	-0.330	2	
4	FL	12	2	4	-0.2683	1.9241	-4.040	3.5030	-0.279	2	
4	FL	12	3	4	0.7974	1.3403	-1.830	3.4244	1.190	2	
4	FL	13	1	15	4.6164	4.7673	-4.727	13.9602	3.750	11	*
4	FL	13	2	15	0.1753	1.5759	-2.913	3.2641	0.431	11	
4	FL	13	3	15	0.5756	1.7152	-2.786	3.9374	1.300	11	
4	FL	16	2	4	0.5213	1.8967	-3.196	4.2389	0.550	2	
4	FL	16	3	5	1.5418	4.5753	-7.426	10.5094	0.754	2	

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL 2

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
4	FL	17	1	11	-2.7735	5.6260	-13.801	8.2535	-1.635	7	
4	FL	17	2	7	-0.3875	3.7313	-7.701	6.9259	-0.275	4	
4	FL	17	3	11	1.5777	2.3143	-2.958	6.1138	2.261	7	
4	FL	18	1	7	-3.3594	11.9918	-26.863	20.1444	-0.741	4	
4	FL	18	2	4	0.4915	3.4324	-6.236	7.2189	0.286	2	
4	FL	18	3	7	-0.7848	1.8632	-4.437	2.8670	-1.114	4	
4	GA	10	1	4	0.0351	6.8349	-13.361	13.4314	0.010	2	
4	GA	10	3	4	1.1974	1.6614	-2.059	4.4537	1.441	2	
4	KY	1	1	24	3.5295	4.4108	-5.116	12.1747	3.920	20	*
4	KY	1	2	15	1.2051	2.0194	-2.753	5.1630	2.311	11	*
4	KY	1	3	20	0.8019	2.4840	-4.067	5.6706	1.444	16	
4	KY	2	1	10	-0.8315	2.6156	-5.958	4.2951	-1.005	7	
4	KY	2	2	9	-0.5132	1.6143	-3.677	2.6509	-0.954	6	
4	KY	2	3	7	-1.4656	1.6386	-4.677	1.7460	-2.366	5	
4	MS	100	1	4	-7.9160	1.4234	-10.706	-5.1260	-11.122	2	*
4	MS	100	2	4	-4.1568	2.8698	-9.782	1.4680	-2.897	2	
4	MS	100	3	4	-1.4230	1.8830	-5.114	2.2676	-1.511	2	
4	NC	2	1	9	1.0863	2.6112	-4.032	6.2043	1.248	5	
4	NC	2	2	9	-0.2308	1.9788	-4.109	3.6477	-0.350	5	
4	NC	2	3	9	1.3036	3.1477	-4.866	7.4731	1.242	5	
4	NC	3	1	21	-2.9205	3.7506	-10.272	4.4307	-3.568	17	*
4	NC	3	2	21	-0.4171	2.3574	-5.038	4.2034	-0.811	17	
4	NC	3	3	21	-0.3018	1.4581	-3.160	2.5561	-0.949	17	
4	SC	1	1	39	1.0240	8.5175	-15.670	17.7183	0.751	36	
4	TN	2	1	24	0.2134	2.0040	-3.714	4.1411	0.522	20	
4	TN	2	2	24	-0.4752	1.8678	-4.136	3.1857	-1.246	20	
4	TN	2	3	24	-0.8417	1.9885	-4.739	3.0558	-2.074	20	
4	TN	3	1	15	0.5658	2.1612	-3.670	4.8016	1.014	12	
4	TN	3	2	15	1.3044	2.7480	-4.082	6.6904	1.838	12	
4	TN	3	3	15	0.6379	1.5262	-2.353	3.6293	1.619	12	
5	IL	1	2	7	2.1350	3.2214	-4.179	8.4489	1.754	4	
5	IL	1	3	7	3.0661	3.5928	-3.976	10.1079	2.258	4	
5	IL	3	1	11	-4.0000	4.6496	-13.113	5.1133	-2.853	7	*
5	IL	3	2	11	-0.1550	2.6418	-5.333	5.0230	-0.195	7	
5	IL	3	3	11	-0.0758	1.9354	-3.869	3.7177	-0.130	7	
5	IN	1	1	13	-1.2355	8.7488	-18.383	15.9122	-0.509	9	
5	IN	1	2	12	1.6757	3.5136	-5.211	8.5625	1.652	8	
5	IN	1	3	13	2.5808	2.1592	-1.651	6.8128	4.310	9	*
5	IN	2	1	8	0.3088	3.8474	-7.232	7.8498	0.227	4	
5	IN	8	1	12	0.3125	2.0223	-3.651	4.2763	0.535	8	
5	IN	8	2	12	0.7973	1.1906	-1.536	3.1308	2.320	8	*
5	IN	8	3	12	1.3521	0.9731	-0.555	3.2594	4.813	8	*
5	IN	100	1	15	2.7921	6.5619	-10.069	15.6534	1.648	11	
5	IN	100	3	15	3.8908	4.1683	-4.279	12.0606	3.615	11	*
5	MI	1	1	8	-0.1493	5.6047	-11.134	10.8359	-0.075	4	
5	MI	1	2	8	-0.3094	1.9697	-4.170	3.5512	-0.444	4	
5	MI	1	3	8	-2.0133	2.8850	-7.668	3.6414	-1.974	4	
5	MI	2	1	7	-5.3727	10.5852	-26.120	15.3744	-1.343	3	
5	MI	2	2	6	-1.7280	4.8450	-11.224	7.7681	-0.874	3	
5	MI	2	3	6	-2.6488	4.0703	-10.627	5.3290	-1.594	3	
5	MN	1	1	20	-0.4502	4.7233	-9.708	8.8074	-0.426	16	
5	MN	1	2	18	-1.5294	3.0290	-7.466	4.4075	-2.142	14	
5	OH	1	1	5	-1.7115	9.7216	-20.766	17.3428	-0.394	3	

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL 3

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
5	OH	1	3	4	1.5105	8.6594	-15.462	18.4829	0.3489	2	
5	OH	8	1	4	3.7511	7.6185	-11.181	18.6834	0.9847	2	
5	OH	8	3	4	0.8728	1.9795	-3.007	4.7526	0.8818	2	
5	OH	9	1	4	-7.2380	4.0119	-15.101	0.6254	-3.6083	2	
5	OH	9	2	4	-2.8232	1.1701	-5.117	-0.5298	-4.8256	2	*
5	OH	9	3	4	-2.1692	0.6321	-3.408	-0.9304	-6.8638	2	*
5	OH	12	1	4	-1.8344	4.4998	-10.654	6.9852	-0.8153	2	
5	OH	12	2	4	6.8466	8.2790	-9.380	23.0735	1.6540	2	
5	OH	12	3	4	5.0334	8.3015	-11.238	21.3044	1.2126	2	
5	OH	15	1	4	-6.8558	3.7878	-14.280	0.5682	-3.6200	2	
5	OH	15	3	4	-2.9777	0.7833	-4.513	-1.4425	-7.6033	2	*
5	WI	1	1	10	2.1365	4.3136	-6.318	10.5912	1.5662	6	
5	WI	1	2	10	2.4940	2.7213	-2.840	7.8277	2.8982	6	*
5	WI	1	3	10	0.9387	1.5630	-2.125	4.0021	1.8992	6	
6	LA	1	1	12	-2.4190	5.8369	-13.859	9.0213	-1.4357	8	
6	LA	1	2	11	1.9951	5.0142	-7.833	11.8230	1.3196	7	
6	NM	1	1	9	-2.5812	14.8846	-31.755	26.5927	-0.5202	6	
6	NM	1	2	9	0.3765	2.8271	-5.165	5.9176	0.3995	6	
6	NM	1	3	6	-0.5878	2.0838	-4.672	3.4964	-0.6909	4	
6	NM	2	1	13	-3.6369	3.7704	-11.027	3.7532	-3.4778	10	*
6	NM	2	2	13	-0.1300	6.9396	-13.732	13.4716	-0.0675	10	
6	NM	2	3	9	-2.5773	7.0803	-16.455	11.3001	-1.0920	7	
6	OK	101	1	5	-1.1305	4.8821	-10.699	8.4383	-0.5178	2	
6	OK	101	2	5	-2.7515	2.3088	-7.277	1.7738	-2.6648	2	
6	OK	103	1	6	2.1363	5.2788	-8.210	12.4828	0.9913	3	
6	OK	103	2	6	-1.8908	2.0884	-5.984	2.2024	-2.2178	3	
6	OK	103	3	5	0.2497	1.4427	-2.578	3.0773	0.3870	2	
6	TX	1	1	10	1.8430	8.1266	-14.085	17.7712	0.7172	7	
6	TX	1	2	6	0.3222	4.7549	-8.997	9.6417	0.1660	4	
6	TX	2	1	12	2.6334	5.0479	-7.260	12.5273	1.8072	9	
6	TX	2	2	8	3.0705	3.2257	-3.252	9.3928	2.6923	6	*
7	IA	1	1	8	-1.3017	3.9932	-9.128	6.5250	-0.9220	4	
7	IA	1	2	4	0.9375	5.7622	-10.356	12.2314	0.3254	2	
7	IA	1	3	8	0.7694	2.9798	-5.071	6.6098	0.7303	4	
7	IA	2	1	11	-1.7255	2.5951	-6.812	3.3610	-2.2052	7	
7	IA	2	2	11	-0.6464	1.1088	-2.820	1.5268	-1.9336	7	
7	IA	2	3	11	-0.3732	0.9278	-2.192	1.4452	-1.3342	7	
7	IA	3	1	4	-6.6208	10.0147	-26.250	13.0080	-1.3222	2	
7	IA	3	2	4	-6.0078	3.0219	-11.931	-0.0848	-3.9761	2	
7	KS	1	1	8	-7.5870	22.5053	-51.697	36.5233	-0.9535	4	
7	KS	1	2	8	-0.2409	4.6802	-9.414	8.9323	-0.1456	4	
7	MO	2	1	8	-2.2437	4.7580	-11.569	7.0819	-1.3338	4	
7	MO	2	2	8	0.9728	2.0689	-3.082	5.0277	1.3299	4	
7	MO	2	3	8	2.6487	2.1312	-1.528	6.8258	3.5153	4	*
7	MO	3	1	4	5.8250	2.0214	1.863	9.7869	5.7634	2	*
7	MO	3	3	4	4.8406	3.8011	-2.610	12.2908	2.5470	2	
7	MO	4	1	7	3.3226	8.4082	-13.157	19.8027	1.0455	4	
7	MO	4	3	4	4.5020	4.0342	-3.405	12.4090	2.2319	2	
7	MO	5	1	4	3.2204	4.1100	-4.835	11.2760	1.5671	2	
7	MO	5	2	4	4.7037	2.8400	-0.863	10.2700	3.3125	2	
7	MO	5	3	4	4.3710	1.8074	0.828	7.9136	4.8367	2	*
7	NE	2	1	8	2.5195	6.6545	-10.523	15.5623	1.0709	4	
7	NE	2	2	8	0.7525	2.9869	-5.102	6.6069	0.7126	4	

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
7	NE	2	3	6	-0.3954	2.9669	-6.210	5.4198	-0.3264	3	
8	CO	1	1	26	12.3358	10.6674	-8.572	33.2440	5.8965	22	*
8	CO	1	4	6	0.0049	2.0094	-3.933	3.9432	0.0059	3	
8	MT	1	1	8	4.5896	10.9368	-16.847	26.0258	1.1869	4	
8	MT	1	2	8	2.7497	5.4892	-8.009	13.5085	1.4169	4	
8	MT	1	3	6	0.5725	4.5155	-8.278	9.4228	0.3105	3	
8	UT	1	1	17	0.8830	4.0913	-7.136	8.9019	0.8899	14	
8	UT	1	2	17	0.6193	2.1582	-3.611	4.8494	1.1830	14	
8	UT	1	3	17	0.9125	2.6688	-4.318	6.1434	1.4097	14	
9	AZ	300	1	10	-0.4400	1.3676	-3.120	2.2405	-1.0174	6	
9	CA	4	1	31	1.1688	3.3096	-5.318	7.6556	1.9662	27	
9	CA	4	2	31	0.7108	1.8172	-2.851	4.2725	2.1777	27	*
9	CA	4	3	31	0.0244	1.2658	-2.457	2.5054	0.1072	27	
9	CA	36	1	9	2.3933	1.6222	-0.786	5.5728	4.4259	5	*
9	CA	36	2	9	-0.1794	1.7637	-3.636	3.2775	-0.3051	5	
9	CA	36	3	9	-2.7210	2.4392	-7.502	2.0598	-3.3466	5	*
9	CA	61	1	10	6.1198	3.7342	-1.199	13.4389	5.1825	8	*
9	CA	61	2	10	4.5912	2.0227	0.627	8.5558	7.1777	8	*
9	CA	61	3	10	2.1210	1.6020	-1.019	5.2610	4.1868	8	*
9	HI	120	1	62	2.9713	9.5019	-15.652	21.5950	2.4623	59	*
9	HI	120	3	26	1.1770	1.3117	-1.394	3.7480	4.5755	23	*
10	ID	1	3	6	-0.3388	0.5493	-1.415	0.7378	-1.5110	3	
10	OR	1	1	24	-4.2215	9.1539	-22.163	13.7200	-2.2593	21	*
10	WA	1	1	35	0.2880	5.3417	-10.182	10.7579	0.3190	31	
10	WA	1	2	35	1.3596	2.8862	-4.297	7.0166	2.7870	31	*
10	WA	1	3	35	1.3513	2.5454	-3.638	6.3403	3.1408	31	*

POLLUTANT =NO2

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	MA	1	1	9	0.1152	7.2294	-14.054	14.2847	0.0478	6	
1	MA	1	2	8	-1.8560	10.4571	-22.352	18.6399	-0.5020	5	
1	MA	1	3	5	1.3447	2.8135	-4.170	6.8593	1.0687	3	
1	RI	1	1	6	0.6157	9.1703	-17.358	18.5896	0.1645	3	
1	RI	1	2	5	2.8319	3.0698	-3.185	8.8487	2.0628	2	
1	VT	1	1	4	-2.4546	3.5375	-9.388	4.4789	-1.3878	2	
1	VT	1	2	4	-2.1436	2.2908	-6.633	2.3463	-1.8715	2	
1	VT	1	3	4	0.2965	2.9272	-5.441	6.0338	0.2026	2	
2	NJ	1	1	7	5.2381	5.3576	-5.263	15.7390	2.5867	5	*
2	NJ	1	2	7	1.0690	5.5046	-9.720	11.8580	0.5138	5	
2	NJ	1	3	7	0.0724	4.8030	-9.342	9.4862	0.0399	5	
2	NY	1	3	66	1.5711	3.5583	-5.403	8.5455	3.5870	62	*
3	DE	1	1	11	2.0852	7.8860	-13.371	17.5418	0.8770	7	
3	DE	1	3	6	-0.3876	2.4023	-5.096	4.3209	-0.3952	3	
3	MD	1	1	6	0.8137	6.6642	-12.248	13.8756	0.2991	3	
3	MD	1	3	5	2.7492	4.4491	-5.971	11.4695	1.3817	2	
3	MD	5	1	4	4.0151	6.8831	-9.476	17.5059	1.1667	2	
3	PA	1	1	27	1.9472	5.4664	-8.767	12.6614	1.8509	23	
3	PA	1	2	14	2.3919	6.5375	-10.422	15.2054	1.3690	10	
3	PA	1	3	20	2.5584	5.3630	-7.953	13.0698	2.1335	16	*

D-6

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL 5

POLLUTANT =NO2

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	PA	2	1	8	7.124	2.5293	2.166	12.0813	7.9662	4	*
3	PA	2	2	5	3.096	2.9912	-2.766	8.9591	2.3147	2	
3	PA	3	1	8	1.054	2.2021	-3.262	5.3702	1.3538	4	
3	PA	3	2	8	0.955	2.1564	-3.272	5.1817	1.2527	4	
3	PA	3	3	6	1.175	2.1897	-3.116	5.4673	1.3149	3	
3	VA	1	2	5	6.993	1.7252	3.611	10.3740	9.0636	2	*
3	VA	1	3	5	1.486	2.8093	-4.020	6.9921	1.1827	2	
3	VA	3	2	5	-0.281	2.0758	-4.350	3.7876	-0.3026	2	
3	VA	3	3	5	-0.093	2.7895	-5.561	5.3740	-0.0749	2	
3	WV	1	1	13	5.094	7.0503	-8.725	18.9124	2.6050	9	*
3	WV	1	2	11	5.031	4.0447	-2.897	12.9585	4.1253	7	*
3	WV	1	3	9	2.428	2.7296	-2.922	7.7776	2.6681	5	*
3	WV	2	1	8	7.575	8.3728	-8.835	23.9862	2.5591	4	
3	WV	2	2	7	3.513	4.4257	-5.161	12.1877	2.1003	3	
3	WV	2	3	8	0.868	3.2683	-5.538	7.2738	0.7512	4	
4	FL	11	1	4	3.702	3.3228	-2.811	10.2142	2.2280	2	
4	FL	11	2	4	1.761	0.8287	0.137	3.3856	4.2506	2	
4	FL	11	3	4	1.939	2.0890	-2.156	6.0331	1.8561	2	
4	FL	16	1	4	-8.001	9.9106	-27.426	11.4238	-1.6146	2	
4	FL	16	2	4	-6.520	7.9603	-22.122	9.0826	-1.6380	2	
4	FL	18	1	4	15.882	20.2854	-23.877	55.6412	1.5659	2	
4	GA	10	1	4	6.412	4.5659	-2.537	15.3615	2.8087	2	
4	GA	10	3	4	-5.616	5.5612	-16.516	5.2841	-2.0197	2	
4	KY	1	1	24	-4.109	10.9480	-25.567	17.3490	-1.8388	20	
4	KY	1	2	21	0.123	6.3970	-12.416	12.6605	0.0878	17	
4	KY	1	3	22	0.838	7.1200	-13.118	14.7930	0.5519	18	
4	NC	2	1	8	0.594	14.0004	-26.847	28.0347	0.1200	4	
4	NC	2	2	4	1.518	8.1049	-14.368	17.4034	0.3745	2	
4	NC	2	3	8	-1.245	5.9926	-12.991	10.5004	-0.5877	4	
5	IL	1	1	4	-4.113	3.5088	-10.990	2.7642	-2.3444	2	
5	IL	1	2	4	-2.514	2.9356	-8.268	3.2402	-1.7125	2	
5	IL	1	3	4	-3.948	2.3746	-8.602	0.7061	-3.3253	2	
5	IL	3	1	10	0.322	7.4850	-14.349	14.9925	0.1360	6	
5	IL	3	2	10	-0.020	4.4755	-8.792	8.7516	-0.0144	6	
5	IL	3	3	10	0.539	4.8981	-9.061	10.1390	0.3479	6	
5	IN	1	1	16	-0.656	4.7734	-10.012	8.7000	-0.5496	12	
5	IN	1	2	16	-1.275	4.2167	-9.540	6.9892	-1.2099	12	
5	IN	1	3	15	-1.720	4.8641	-11.254	7.8136	-1.3695	11	
5	IN	8	1	4	-1.224	2.5457	-6.213	3.7656	-0.9616	2	
5	IN	8	2	4	-0.339	1.4092	-3.101	2.4231	-0.4811	2	
5	IN	8	3	4	0.940	1.1591	-1.332	3.2117	1.6217	2	
5	OH	8	1	4	5.252	9.2415	-12.862	23.3650	1.1366	2	
5	OH	8	2	4	2.937	8.4798	-13.684	19.5571	0.6927	2	
5	OH	8	3	4	2.078	8.7883	-15.147	19.3034	0.4730	2	
5	OH	9	1	4	-11.720	17.6631	-46.340	22.8995	-1.3271	2	
5	OH	9	2	4	-7.338	9.8478	-26.640	11.9634	-1.4903	2	
5	OH	9	3	4	-6.708	9.5428	-25.412	11.9960	-1.4059	2	
5	WI	1	2	5	-2.823	5.6321	-13.861	8.2163	-1.1206	2	
5	WI	1	3	5	-2.107	2.9089	-7.808	3.5947	-1.6194	2	
6	LA	1	1	8	-0.147	3.0670	-6.158	5.8645	-0.1354	4	
6	LA	1	2	8	-3.171	2.3948	-7.865	1.5228	-3.7452	4	*
6	LA	1	3	8	-5.197	2.6105	-10.313	-0.0799	-5.6303	4	*
6	OK	103	1	6	3.036	12.7101	-21.876	27.9474	0.5850	3	

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =NO2

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
6	OK	103	2	6	2.316	3.8668	-5.263	9.8947	1.4670	3	
6	OK	103	3	6	2.341	2.9679	-3.476	8.1577	1.9318	3	
6	TX	1	1	5	4.053	18.5070	-32.221	40.3264	0.4897	3	
6	TX	1	2	5	1.178	4.8384	-8.305	10.6614	0.5445	3	
6	TX	2	1	7	-1.624	8.5593	-18.400	15.1520	-0.5020	4	
6	TX	2	2	7	-1.422	4.9756	-11.174	8.3305	-0.7560	4	
7	MO	2	1	8	-1.481	10.9713	-22.985	20.0229	-0.3818	4	
7	MO	2	2	8	-4.282	5.8300	-15.709	7.1447	-2.0775	4	
7	MO	2	3	8	-5.165	4.4901	-13.966	3.6352	-3.2538	4	*
7	MO	3	1	4	3.791	6.5623	-9.071	16.6533	1.1554	2	
7	MO	3	2	4	-0.280	2.5881	-5.353	4.7929	-0.2163	2	
7	MO	3	3	4	-1.600	2.5012	-6.502	3.3026	-1.2791	2	
7	MO	4	1	4	-9.422	18.6223	-45.922	27.0776	-1.0119	2	
7	MO	4	2	4	-2.510	3.3112	-9.000	3.9802	-1.5159	2	
7	MO	4	3	4	-0.749	0.4533	-1.638	0.1391	-3.3064	2	
8	CO	1	1	9	-10.466	10.0357	-30.136	9.2042	-3.1286	5	*
8	CO	1	2	9	-6.739	6.5097	-19.498	6.0196	-3.1059	5	*
8	CO	1	3	9	-5.169	6.0748	-17.075	6.7379	-2.5525	5	
8	UT	1	1	9	-3.465	15.0393	-32.942	26.0120	-0.6912	6	
8	UT	1	2	9	-3.746	6.6842	-16.848	9.3546	-1.6815	6	
8	UT	1	3	9	-3.687	4.5431	-12.591	5.2179	-2.4344	6	
9	CA	4	1	26	-2.172	4.8690	-11.715	7.3716	-2.2741	22	*
9	CA	4	2	26	-0.387	3.9015	-8.034	7.2603	-0.5054	22	
9	CA	4	3	26	-0.408	3.9687	-8.186	7.3709	-0.5238	22	
9	CA	36	1	9	0.751	4.9396	-8.931	10.4327	0.4561	5	
9	CA	36	2	9	0.322	5.5085	-10.474	11.1190	0.1756	5	
9	CA	36	3	9	0.651	5.7789	-10.676	11.9773	0.3378	5	
9	CA	61	1	10	-9.655	7.8203	-24.983	5.6725	-3.9043	8	*
9	CA	61	2	10	-7.227	6.7776	-20.511	6.0570	-3.3720	8	*
9	CA	61	3	10	-6.605	7.0997	-20.521	7.3101	-2.9420	8	*
10	OR	1	1	6	-4.682	11.5400	-27.300	17.9365	-0.9938	3	
10	OR	1	2	6	-2.646	3.3793	-9.269	3.9775	-1.9179	3	
10	OR	1	3	6	-2.013	1.7018	-5.349	1.3224	-2.8975	3	

POLLUTANT =O3

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	CT	1	1	11	-0.7076	3.6709	-7.903	6.4874	-0.6393	9	
1	CT	1	3	11	-3.0531	3.1658	-9.297	3.1910	-3.1785	9	*
1	ME	1	1	19	-0.1019	5.7302	-11.333	11.1293	-0.0775	17	
1	ME	1	2	19	-3.5024	13.5262	-30.014	23.0090	-1.1287	17	
1	ME	1	3	19	-1.3149	5.6166	-12.323	9.6936	-1.0205	17	
1	MA	1	1	22	-3.1606	2.8590	-8.764	2.4431	-5.1851	18	*
1	MA	1	2	22	-3.1451	3.0787	-9.179	2.8890	-4.7917	18	*
1	MA	1	3	15	-3.1488	3.6450	-10.293	3.9954	-3.3458	12	*
1	RI	1	1	8	1.4469	3.3736	-5.165	8.0592	1.2131	6	
1	RI	1	2	6	2.6437	1.9122	-1.104	6.3915	3.3066	4	*
1	VT	1	1	6	-1.5885	6.0842	-13.514	10.3364	-0.6395	3	
1	VT	1	2	6	-1.3807	4.1401	-9.495	6.7340	-0.8169	3	
1	VT	1	3	6	-1.1166	3.3499	-7.682	5.4492	-0.8164	3	

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =03

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
2	NJ	1	1	44	1.2630	5.33454	-9.193	11.7187	1.5705	40	
2	NJ	1	2	44	0.7184	5.15595	-9.387	10.8241	0.9243	40	
2	NJ	1	3	44	-2.4903	5.67343	-13.610	8.6296	-2.9116	40	*
2	NY	1	1	94	0.2672	4.53842	-8.628	9.1625	0.5708	90	
3	DE	1	3	14	0.7931	3.68356	-6.427	8.0129	0.8056	10	
3	MD	1	1	20	0.7966	2.77283	-4.638	6.2314	1.2848	16	
3	MD	1	2	20	1.1982	2.98956	-4.661	7.0577	1.7923	16	
3	MD	1	3	20	0.0174	2.71756	-5.309	5.3438	0.0287	16	
3	MD	3	1	4	-1.5491	4.46982	-10.310	7.2117	-0.6932	2	
3	MD	3	3	4	-1.6718	2.82088	-7.201	3.8572	-1.1853	2	
3	MD	5	1	8	-0.0378	2.22066	-4.390	4.3147	-0.0481	5	
3	MD	5	2	8	0.8694	1.99029	-3.032	4.7704	1.2355	5	
3	MD	5	3	8	1.1101	2.13727	-3.079	5.2991	1.4691	5	
3	PA	1	1	33	0.7136	4.53727	-8.179	9.6066	0.9035	29	
3	PA	1	2	33	0.1649	4.01799	-7.710	8.0402	0.2358	29	
3	PA	1	3	33	-0.1340	3.80142	-7.585	7.3168	-0.2026	29	
3	PA	2	1	13	-2.0081	3.12133	-8.126	4.1097	-2.3196	10	*
3	PA	2	2	13	-0.2348	2.59592	-5.323	4.8532	-0.3261	10	
3	PA	2	3	13	1.2122	2.87595	-4.425	6.8490	1.5197	10	
3	PA	3	1	8	-1.6144	2.12445	-5.778	2.5495	-2.1494	4	
3	PA	3	2	8	-1.9515	2.44095	-6.736	2.8327	-2.2613	4	
3	PA	3	3	8	-2.4576	2.54511	-7.446	2.5308	-2.7312	4	
3	VA	1	1	11	-2.6693	3.98385	-10.478	5.1391	-2.2222	7	
3	VA	1	2	9	-1.2286	2.45208	-6.035	3.5774	-1.5032	6	
3	VA	1	3	11	-0.9261	1.68080	-4.220	2.3682	-1.8275	7	
3	VA	1	4	9	-1.2405	1.87681	-4.919	2.4380	-1.9829	6	
3	VA	3	1	8	-1.1809	6.02450	-12.989	10.6271	-0.5544	4	
3	VA	3	3	8	-1.4143	4.52518	-10.284	7.4551	-0.8840	4	
3	VA	815	1	27	0.6620	2.11519	-3.484	4.8078	1.6263	23	
3	VA	815	2	16	-1.0910	2.48568	-5.963	3.7809	-1.7556	12	
3	VA	815	3	27	-0.7362	2.64526	-5.921	4.4485	-1.4462	23	
3	WV	1	1	13	-3.2798	3.98280	-11.086	4.5265	-2.9691	9	*
3	WV	1	2	12	-1.8379	2.38848	-6.519	2.8435	-2.6656	8	*
3	WV	1	3	11	-2.5709	2.68100	-7.826	2.6839	-3.1804	7	*
4	AL	12	1	10	-6.7467	8.74548	-23.888	10.3944	-2.4395	7	*
4	AL	12	2	10	-5.1780	3.69129	-12.413	2.0570	-4.4359	7	*
4	AL	12	3	10	-4.3577	4.19359	-12.577	3.8617	-3.2860	7	*
4	FL	1	2	7	-0.0067	1.27477	-2.505	2.4919	-0.0139	4	
4	FL	1	3	7	0.1320	2.08039	-3.946	4.2095	0.1678	4	
4	FL	3	1	4	1.0406	3.36475	-5.554	7.6355	0.6185	2	
4	FL	3	2	4	0.1295	2.09427	-3.975	4.2342	0.1236	2	
4	FL	3	3	4	0.1364	3.02263	-5.788	6.0607	0.0902	2	
4	FL	11	1	5	-0.2051	3.21229	-6.501	6.0910	-0.1428	2	
4	FL	11	2	5	-0.5424	2.12166	-4.701	3.6161	-0.5716	2	
4	FL	11	3	5	-0.5204	3.91150	-8.187	7.1461	-0.2975	2	
4	FL	12	1	4	4.4712	3.92977	-3.231	12.1735	2.2755	2	
4	FL	12	2	4	5.5623	4.14853	-2.569	13.6934	2.6816	2	
4	FL	12	3	4	6.6527	7.38046	-7.813	21.1184	1.8028	2	
4	FL	13	1	14	-0.6899	3.41982	-7.393	6.0130	-0.7548	10	
4	FL	13	2	14	1.2345	1.85481	-2.401	4.8699	2.4903	10	*
4	FL	13	3	14	0.7730	2.43536	-4.000	5.5463	1.1877	10	
4	FL	14	1	4	1.0278	2.49181	-3.866	5.9117	0.8249	2	
4	FL	14	2	4	2.9837	3.43683	-3.753	9.7199	1.7363	2	

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL 8

POLLUTANT =03

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
4	FL	14	3	4	2.3841	3.0860	-3.665	8.4327	1.5451	2	
4	FL	16	1	6	-1.9027	4.3138	-10.358	6.5524	-1.0804	3	
4	FL	16	2	6	-0.8313	2.5181	-5.767	4.1043	-0.8086	3	
4	FL	16	3	6	0.7600	2.0954	-3.347	4.8669	0.8884	3	
4	FL	17	1	5	-2.5260	9.6909	-21.520	16.4681	-0.5829	2	
4	FL	17	2	5	-5.8916	8.8589	-23.255	11.4719	-1.4871	2	
4	FL	17	3	5	-6.3378	7.5515	-21.139	8.4632	-1.8767	2	
4	FL	18	1	5	-2.6320	1.0590	-4.708	-0.5563	-5.5572	2	*
4	FL	18	2	5	-2.2356	3.8173	-9.718	5.2464	-1.3095	2	
4	FL	18	3	5	-1.7275	3.6379	-8.858	5.4027	-1.0618	2	
4	GA	10	1	6	-4.9604	4.7491	-14.269	4.3478	-2.5585	4	
4	GA	10	2	6	-1.6922	3.1276	-7.822	4.4380	-1.3253	4	
4	GA	10	3	6	0.3926	2.3191	-4.153	4.9381	0.4147	4	
4	KY	1	1	35	-0.5414	6.9415	-14.147	13.0639	-0.4615	32	
4	KY	1	2	35	-0.2890	6.7960	-13.609	13.0311	-0.2516	32	
4	KY	1	3	32	-0.7329	6.4202	-13.316	11.8506	-0.6457	29	
4	KY	2	1	8	-1.0391	6.5576	-13.892	11.8138	-0.4482	4	
4	KY	2	2	8	-0.4377	0.7106	-1.831	0.9551	-1.7422	4	
4	KY	2	3	8	-0.9316	1.8568	-4.571	2.7078	-1.4190	4	
4	MS	100	1	11	-1.6647	1.6412	-4.882	1.5522	-3.3640	7	*
4	MS	100	2	11	-1.0655	2.2517	-5.479	3.3478	-1.5694	7	
4	MS	100	3	11	-0.4153	2.8906	-6.081	5.2503	-0.4765	7	
4	NC	1	1	16	3.5099	5.9333	-8.119	15.1392	2.3662	13	*
4	NC	1	2	16	1.7009	3.3617	-4.888	8.2899	2.0239	13	
4	NC	1	3	15	1.5829	2.6649	-3.640	6.8061	2.3005	12	*
4	NC	2	1	6	0.0426	5.5088	-10.755	10.8398	0.0189	3	
4	NC	2	2	6	-1.2643	1.7116	-4.619	2.0905	-1.8093	3	
4	NC	2	3	6	-1.3946	1.2079	-3.762	0.9729	-2.8280	3	
4	NC	3	1	11	0.8855	2.8234	-4.648	6.4194	1.0402	7	
4	NC	3	2	11	0.6085	2.7734	-4.827	6.0444	0.7277	7	
4	NC	3	3	11	0.4814	2.6213	-4.656	5.6191	0.6091	7	
4	TN	1	1	5	0.2833	4.4941	-8.525	9.0918	0.1409	3	
4	TN	1	3	5	2.9408	1.3727	0.250	5.6312	4.7906	3	*
4	TN	2	1	10	-1.8260	2.5689	-6.861	3.2091	-2.2478	7	
4	TN	2	2	8	-1.9295	1.1844	-4.251	0.3920	-4.6077	5	*
4	TN	3	1	10	4.3975	10.1672	-15.530	24.3252	1.3678	7	
4	TN	3	2	10	2.3328	8.9727	-15.254	19.9194	0.8222	7	
4	TN	3	3	10	1.4808	7.8047	-13.816	16.7780	0.6000	7	
4	TN	5	1	12	2.3674	3.7058	-4.896	9.6307	2.2130	9	
4	TN	5	2	12	1.6570	1.9048	-2.076	5.3904	3.0134	9	*
4	TN	5	3	12	1.4685	1.7233	-1.909	4.8462	2.9520	9	*
5	IL	1	1	26	-2.4741	3.6708	-9.669	4.7206	-3.4367	22	*
5	IL	1	2	26	-3.1957	2.8324	-8.747	2.3559	-5.7530	22	*
5	IL	1	3	26	-2.9453	2.5145	-7.874	1.9831	-5.9726	22	*
5	IL	3	1	21	-4.2670	5.6021	-15.247	6.7131	-3.4905	18	*
5	IL	3	2	20	-1.2973	4.3126	-9.750	7.1554	-1.3453	17	
5	IL	3	3	21	-0.7405	4.3736	-9.313	7.8318	-0.7759	18	
5	IN	1	1	27	-0.3237	4.7414	-9.617	8.9695	-0.3548	25	
5	IN	1	3	27	-1.1004	2.9726	-6.927	4.7260	-1.9234	25	
5	IN	2	1	4	-3.7500	3.1869	-9.996	2.4963	-2.3534	2	
5	IN	2	2	4	-1.8750	2.3585	-6.498	2.7477	-1.5900	2	
5	IN	2	3	4	-2.6875	3.0233	-8.613	3.2383	-1.7778	2	
5	IN	3	1	8	1.9253	2.5086	-2.992	6.8422	2.1707	6	

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =03

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
5	IN	3	3	8	-0.3780	2.3856	-5.054	4.2977	-0.4482	6	
5	IN	8	1	11	-1.4203	5.8055	-12.799	9.9586	-0.8114	9	
5	IN	8	2	11	-0.0342	3.6800	-7.247	7.1787	-0.0308	9	
5	IN	8	3	11	-0.1608	3.7957	-7.600	7.2788	-0.1405	9	
5	IN	100	1	20	0.3191	6.2143	-11.861	12.4991	0.2296	18	
5	IN	100	2	20	-1.4214	4.7289	-10.690	7.8473	-1.3443	18	
5	IN	100	3	20	-1.2476	4.0618	-9.209	6.7135	-1.3737	18	
5	MI	1	1	15	-2.2366	5.2934	-12.612	8.1385	-1.6364	12	
5	MI	1	2	15	-1.2280	4.1673	-9.396	6.9399	-1.1412	12	
5	MI	1	3	15	-2.0402	3.8343	-9.555	5.4751	-2.0608	12	
5	MI	2	1	4	0.4636	7.6601	-14.550	15.4774	0.1210	2	
5	MI	2	2	4	1.3201	3.1959	-4.944	7.5841	0.8261	2	
5	MN	1	1	10	2.0379	5.1421	-8.040	12.1164	1.2533	6	
5	MN	1	2	10	1.5435	3.1795	-4.688	7.7754	1.5352	6	
5	MN	1	3	10	0.3371	2.9398	-5.425	6.0992	0.3627	6	
5	OH	1	1	5	-6.9773	10.2631	-27.093	13.1384	-1.5202	3	
5	OH	1	3	4	-7.3632	10.7068	-28.348	13.6221	-1.3754	2	
5	OH	14	1	4	0.8996	4.1518	-7.238	9.0371	0.4334	2	
5	OH	14	3	4	1.3822	5.0552	-8.526	11.2904	0.5468	2	
5	WI	1	1	21	-2.0926	6.2369	-14.317	10.1318	-1.5375	18	
5	WI	1	2	17	-2.6836	4.0747	-10.670	5.3028	-2.7155	14	*
5	WI	1	3	20	-1.2800	3.9275	-8.978	6.4179	-1.4575	17	
6	AR	1	2	4	0.7114	1.4124	-2.057	3.4797	1.0074	2	
6	AR	1	3	4	1.1096	2.1240	-3.053	5.2727	1.0448	2	
6	LA	1	1	53	-5.0332	3.8466	-12.572	2.5061	-9.5259	49	*
6	LA	1	2	53	-1.0073	3.2683	-7.413	5.3986	-2.2437	49	*
6	LA	1	3	53	0.2040	3.0579	-5.789	6.1975	0.4857	49	
6	NM	1	1	9	-2.2227	7.3624	-16.653	12.2076	-0.9057	6	
6	NM	1	2	9	-2.0401	5.6928	-13.198	9.1178	-1.0751	6	
6	NM	1	3	6	-1.8025	5.7436	-13.060	9.4548	-0.7687	4	
6	NM	2	1	13	-4.6787	5.9127	-16.268	6.9102	-2.8530	10	*
6	NM	2	2	13	-3.7219	4.1575	-11.871	4.4268	-3.2277	10	*
6	NM	2	3	8	-1.5978	1.8357	-5.196	2.0001	-2.4619	6	*
6	OK	103	1	7	-3.8849	2.3046	-8.402	0.6321	-4.4600	4	*
6	OK	103	2	7	-2.3841	2.6656	-7.609	2.8405	-2.3663	4	
6	OK	103	3	6	-1.2572	2.5812	-6.316	3.8020	-1.1930	3	
6	TX	1	1	17	2.8211	13.9915	-24.602	30.2445	0.8313	14	
6	TX	1	2	17	2.1372	7.1846	-11.945	16.2191	1.2265	14	
6	TX	1	3	11	-2.6731	5.6281	-13.704	8.3580	-1.5752	9	
6	TX	2	1	15	0.0221	2.8726	-5.608	5.6523	0.0297	12	
6	TX	2	2	10	1.6136	3.5063	-5.259	8.4859	1.4553	8	
6	TX	6	1	17	-4.5622	4.0603	-12.520	3.3959	-4.6328	14	*
6	TX	6	3	11	-0.9504	1.9837	-4.838	2.9375	-1.5891	9	
7	IA	1	1	6	-4.1350	2.7329	-9.491	1.2215	-3.7062	3	*
7	IA	1	2	6	0.0456	0.9715	-1.859	1.9498	0.1150	3	
7	IA	1	3	5	0.4618	0.4835	-0.486	1.4095	2.1354	2	
7	IA	2	1	24	2.4304	4.2220	-5.845	10.7056	2.8201	20	*
7	IA	2	2	24	1.6693	3.1207	-4.447	7.7857	2.6205	20	*
7	IA	3	1	4	0.3268	1.5715	-2.753	3.4070	0.4159	2	
7	IA	3	2	4	0.2953	0.3905	-0.470	1.0607	1.5123	2	
7	IA	3	3	4	-0.6759	2.7707	-6.107	4.7547	-0.4879	2	
7	KS	1	1	7	-0.2693	4.4100	-8.913	8.3743	-0.1616	3	
7	KS	1	2	7	0.2751	2.3428	-4.317	4.8670	0.3106	3	

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =O3

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
7	KS	1	3	7	-0.2379	2.4924	-5.123	4.6472	-0.2525	3	
7	MO	1	1	8	1.3588	5.5378	-9.495	12.2130	0.6940	4	
7	MO	1	2	8	1.1783	5.1166	-8.850	11.2068	0.6513	4	
7	MO	1	3	8	-0.3055	4.9597	-10.027	9.4156	-0.1742	4	
7	MO	4	1	4	4.1927	4.8551	-5.323	13.7086	1.7271	2	
7	MO	4	2	4	0.6673	5.7596	-10.622	11.9561	0.2317	2	
7	MO	4	3	4	1.7487	5.9008	-9.817	13.3143	0.5927	2	
7	MO	5	1	4	3.0597	1.0424	1.017	5.1029	5.8703	2	*
7	MO	5	2	4	1.6762	2.2404	-2.715	6.0674	1.4964	2	
7	MO	5	3	4	3.4779	4.3371	-5.023	11.9787	1.6038	2	
8	CO	1	1	27	-3.8447	7.7570	-19.048	11.3591	-2.5754	23	*
8	CO	1	2	27	-0.7249	4.5961	-9.733	8.2835	-0.8195	23	
8	CO	1	3	27	-0.4299	4.9592	-10.150	9.2901	-0.4505	23	
8	UT	1	1	11	-0.9583	2.9111	-6.664	4.7475	-1.0918	8	
8	UT	1	2	10	-0.8655	3.0363	-6.817	5.0856	-0.9014	7	
8	UT	1	3	10	-1.4049	2.6924	-6.682	3.8722	-1.6501	7	
8	UT	1	4	10	-1.5429	2.6006	-6.640	3.5542	-1.8761	7	
9	AZ	200	1	6	7.7220	27.4067	-45.995	61.4390	0.6902	3	
9	CA	4	1	44	-2.7585	3.8311	-10.267	4.7504	-4.7761	40	*
9	CA	4	2	44	-2.8986	2.4286	-7.659	1.8615	-7.9169	40	*
9	CA	4	3	44	-3.0985	2.0956	-7.206	1.0089	-9.8078	40	*
9	CA	36	1	9	-0.2784	6.9045	-13.811	13.2543	-0.1210	5	
9	CA	36	2	9	-0.3161	3.3922	-6.965	6.3327	-0.2795	5	
9	CA	36	3	9	-0.4144	2.9728	-6.241	5.4123	-0.4182	5	
9	CA	36	4	7	-0.3089	2.7208	-5.642	5.0238	-0.3004	4	
9	HI	120	1	11	-1.1566	13.8878	-28.377	26.0635	-0.2762	8	
9	HI	120	2	8	0.5610	3.0007	-5.320	6.4424	0.5288	5	
9	HI	120	3	8	0.7261	1.8406	-2.881	4.3336	1.1158	6	
10	OR	1	1	9	5.4565	6.9215	-8.110	19.0227	2.3650	6	
10	OR	1	2	9	0.1856	2.6627	-5.033	5.4045	0.2092	6	
10	OR	1	3	9	-0.2859	2.1118	-4.425	3.8533	-0.4062	6	
10	WA	1	1	11	-0.0564	2.0054	-3.987	3.8741	-0.0933	8	
10	WA	1	2	6	0.7466	1.8853	-2.948	4.4417	0.9701	4	
10	WA	1	3	5	-0.5622	1.0711	-2.661	1.5371	-1.1737	3	

POLLUTANT =PB

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	CT	1	1	6	-2.268	2.5785	-7.322	2.7854	-2.1550	4	
1	CT	1	2	6	-2.629	2.6648	-7.852	2.5940	-2.4166	4	
1	ME	1	1	11	0.839	3.7613	-6.533	8.2108	0.7396	7	
1	ME	1	2	11	0.097	1.0560	-1.972	2.1672	0.3059	7	
1	MA	1	1	11	-1.818	8.2776	-18.042	14.4059	-0.7285	7	
1	MA	1	2	11	-1.364	3.2217	-7.678	4.9509	-1.4038	7	
1	NH	1	1	6	10.733	3.5365	3.802	17.6648	7.4343	4	*
1	NH	1	2	6	7.822	15.9227	-23.386	39.0307	1.2033	4	
1	RI	1	1	12	-2.109	5.2931	-12.483	8.2657	-1.3801	8	
1	RI	1	2	12	0.496	3.5981	-6.556	7.5484	0.4776	8	
2	NJ	1	1	4	4.542	1.0833	2.418	6.6650	8.3846	2	*
2	NJ	1	2	4	3.646	0.3931	2.675	4.4163	18.5500	2	*

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TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =PB

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
2	NY	1	1	28	-0.666	3.9052	-8.320	6.9884	-0.9022	24	
2	NY	1	2	28	-3.836	3.2523	-10.211	2.5384	-6.2414	24	*
3	MD	1	1	20	-2.343	2.7945	-7.820	3.1346	-3.7490	16	*
3	MD	1	2	20	-4.335	2.5336	-9.301	0.6306	-7.6524	16	*
3	PA	1	2	6	-2.939	3.1678	-9.148	3.2695	-2.2728	4	
3	PA	3	1	12	4.328	4.0403	-3.591	12.2469	3.7106	8	*
3	PA	3	2	12	-1.779	3.5934	-8.822	5.2645	-1.7145	8	
3	VA	1	1	13	-10.894	18.3750	-46.909	25.1207	-2.1377	9	
3	VA	1	2	13	-9.927	6.5134	-22.693	2.8396	-5.4950	9	*
3	VA	3	1	24	0.278	1.9517	-3.548	4.1032	0.6972	20	
3	VA	3	2	24	-0.148	1.2496	-2.597	2.3011	-0.5808	20	
3	WV	1	1	16	-1.432	1.2804	-3.942	1.0773	-4.4745	13	*
3	WV	1	2	16	-2.902	1.5081	-5.858	0.0540	-7.6968	13	*
4	AL	11	1	10	-1.454	5.2867	-11.816	8.9079	-0.8697	6	
4	AL	11	2	10	-0.084	3.3140	-6.579	6.4115	-0.0800	6	
4	AL	12	1	12	-1.767	4.5997	-10.783	7.2482	-1.3309	8	
4	AL	12	2	12	-0.553	3.0162	-6.464	5.3590	-0.6348	8	
4	FL	11	1	14	-0.790	4.3437	-9.304	7.7237	-0.6805	10	
4	FL	11	2	14	-1.052	2.8861	-6.709	4.6049	-1.3636	10	
4	FL	12	1	16	-0.119	3.4232	-6.828	6.5905	-0.1389	12	
4	FL	13	1	10	2.989	2.1547	-1.234	7.2120	4.3866	7	*
4	FL	13	2	8	-1.249	1.3891	-3.972	1.4737	-2.5431	5	
4	FL	17	1	7	-5.065	7.7150	-20.187	10.0561	-1.7370	5	
4	FL	17	2	8	-1.677	3.0366	-7.628	4.2752	-1.5616	5	
4	FL	18	1	10	4.431	15.3422	-25.640	34.5017	0.9133	6	
4	FL	18	2	11	-3.243	10.4000	-23.627	17.1411	-1.0342	7	
4	GA	10	1	10	1.905	2.6837	-3.355	7.1653	2.2451	7	
4	GA	10	2	10	1.166	3.6469	-5.982	8.3141	1.0111	7	
4	KY	1	1	6	-2.352	2.8373	-7.913	3.2090	-2.0306	4	
4	KY	1	2	6	0.272	2.4535	-4.537	5.0807	0.2715	4	
4	SC	1	1	4	0.729	2.5785	-4.325	5.7833	0.5657	2	
4	SC	1	2	5	1.016	2.8042	-4.481	6.5117	0.8098	3	
4	TN	1	1	7	-2.054	0.7273	-3.480	-0.6289	-7.4734	4	*
4	TN	1	2	7	-2.065	1.9603	-5.908	1.7768	-2.7875	4	*
5	IL	1	1	9	1.778	2.8284	-3.766	7.3215	1.8856	6	
5	IL	1	2	9	0.815	2.1877	-3.473	5.1028	1.1173	6	
5	IL	2	1	9	1.378	2.8659	-4.239	6.9949	1.4423	6	
5	IL	2	2	9	0.267	0.5913	-0.892	1.4256	1.3530	6	
5	IL	3	1	9	0.871	2.4859	-4.001	5.7435	1.0513	6	
5	IL	3	2	9	-0.547	1.3618	-3.216	2.1224	-1.2043	6	
5	IN	1	1	12	0.767	3.5245	-6.141	7.6751	0.7540	8	
5	IN	1	2	12	5.315	4.0341	-2.592	13.2213	4.5636	8	*
5	IN	8	1	12	0.767	3.5245	-6.141	7.6751	0.7540	8	
5	IN	8	2	12	5.315	4.0341	-2.592	13.2213	4.5636	8	*
5	IN	100	1	12	0.767	3.5245	-6.141	7.6751	0.7540	8	
5	IN	100	2	12	5.315	4.0341	-2.592	13.2213	4.5636	8	*
5	MI	1	1	13	2.269	2.2794	-2.198	6.7368	3.5895	9	*
5	MI	1	2	13	0.545	2.5113	-4.377	5.4671	0.7823	9	
5	OH	1	1	10	-0.808	0.6612	-2.104	0.4875	-3.8665	8	*
5	OH	1	2	10	-0.635	2.2914	-5.126	3.8565	-0.8758	8	
5	OH	6	1	10	-0.849	0.6637	-2.150	0.4517	-4.0456	8	*
5	OH	6	2	10	-0.635	2.2914	-5.126	3.8565	-0.8758	8	
5	OH	8	1	10	-0.849	0.6637	-2.150	0.4517	-4.0456	8	*

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =PB

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
5	OH	8	2	10	-0.6346	2.29138	-5.126	3.8565	-0.876	8	
5	OH	10	1	10	-0.8084	0.66116	-2.104	0.4875	-3.867	8	*
5	OH	10	2	10	-0.6346	2.29138	-5.126	3.8565	-0.876	8	
6	NM	1	1	10	0.7831	1.04521	-1.265	2.8318	2.369	8	*
6	NM	2	1	7	-1.2909	3.47801	-8.108	5.5260	-0.982	5	
6	NM	2	2	7	-3.4814	3.69064	-10.715	3.7523	-2.496	5	
6	TX	3	1	8	-4.1250	0.91692	-5.922	-2.3278	-12.724	5	*
6	TX	3	2	8	-2.5125	0.88223	-4.242	-0.7833	-8.055	5	*
7	MO	2	1	20	0.1985	1.93908	-3.602	3.9991	0.458	16	
7	MO	2	2	9	-1.1126	1.22143	-3.507	1.2814	-2.733	7	*
7	MO	4	1	12	-3.6731	7.15016	-17.687	10.3412	-1.780	8	
7	MO	4	2	9	-5.3997	6.62443	-18.384	7.5842	-2.445	6	
7	MO	6	2	21	0.2148	3.22160	-6.100	6.5291	0.305	18	
7	NE	3	1	6	-3.7674	3.90481	-11.421	3.8860	-2.363	4	
7	NE	3	2	6	-3.5171	3.50737	-10.392	3.3573	-2.456	4	
8	MT	1	2	10	-1.7729	1.28227	-4.286	0.7403	-4.372	7	*
8	UT	1	2	7	1.2393	4.64972	-7.874	10.3527	0.705	5	
9	CA	4	1	9	-3.4462	1.62396	-6.629	-0.2633	-6.366	6	*
9	CA	4	2	9	0.2688	1.50057	-2.672	3.2099	0.537	6	

POLLUTANT =PB_FLOW

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
2	NY	1	2	5	0.9301	0.97568	-0.9822	2.84242	2.1316	3	
9	HI	120	2	5	-4.8554	2.15970	-9.0884	-0.62237	-5.0271	3	*

POLLUTANT =PM10

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	VT	1	2	17	0.7533	2.06743	-3.299	4.8055	1.5024	13	
2	NJ	1	2	11	-1.4074	3.44486	-8.159	5.3445	-1.3550	8	
3	PA	1	2	26	1.6058	5.26741	-8.718	11.9299	1.5544	22	
4	KY	1	2	7	2.3779	3.99391	-5.450	10.2060	1.5753	4	
4	NC	1	2	8	-0.2826	1.11322	-2.465	1.8993	-0.7180	5	
4	NC	3	2	4	1.2169	1.38919	-1.506	3.9397	1.7520	2	
5	IL	1	2	16	1.6170	2.88733	-4.042	7.2761	2.2401	12	*
5	IL	2	2	8	-1.7096	4.00843	-9.566	6.1469	-1.2063	5	
5	IL	3	2	6	0.6894	4.99900	-9.109	10.4874	0.3378	3	
5	IN	8	2	9	0.4990	1.85223	-3.131	4.1294	0.8083	6	
5	MI	1	2	7	-0.2357	3.47298	-7.043	6.5713	-0.1796	4	
5	MI	2	2	11	-1.7279	4.28664	-10.130	6.6739	-1.3369	7	
5	OH	1	2	5	-2.2369	4.47603	-11.010	6.5361	-1.1175	2	
5	OH	3	2	4	-7.7599	1.65313	-11.000	-4.5198	-9.3881	2	*
5	OH	8	2	6	-5.6683	8.02116	-21.390	10.0532	-1.7310	3	
5	OH	10	2	4	-1.8614	7.46640	-16.496	12.7727	-0.4986	2	
5	WI	1	2	5	-0.6008	3.02583	-6.531	5.3298	-0.4440	3	
6	TX	1	2	43	0.5534	3.81685	-6.928	8.0344	0.9507	40	

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =PM10

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
7	IA	1	2	4	-0.7917	3.12349	-6.914	5.3303	-0.5069	2	
7	KS	1	2	7	7.9383	9.37856	-10.444	26.3203	2.2394	4	
7	NE	1	2	7	-5.7756	3.23868	-12.123	0.5722	-4.7182	4	*
8	CO	1	2	40	2.3660	6.27358	-9.930	14.6622	2.3852	38	*
8	ND	1	2	10	-0.8000	2.73153	-6.154	4.5538	-0.9261	6	
8	UT	1	2	31	-1.2312	4.11541	-9.297	6.8350	-1.6658	28	

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	CT	1	1	11	-0.1357	3.62877	-7.248	6.9767	-0.1240	9	
1	CT	1	3	11	3.5706	3.56055	-3.408	10.5493	3.3260	9	*
1	ME	1	1	13	2.6964	5.07043	-7.242	12.6344	1.9174	9	
1	ME	1	2	13	3.1431	5.27112	-7.188	13.4745	2.1500	9	
1	ME	1	3	13	3.1019	5.68405	-8.039	14.2426	1.9676	9	
1	ME	104	1	10	-1.4911	4.17622	-9.676	6.6943	-1.1291	7	
1	ME	104	2	7	-0.3430	5.31315	-10.757	10.0708	-0.1708	5	
1	ME	104	3	7	-0.7686	5.82240	-12.180	10.6433	-0.3493	5	
1	ME	110	1	8	-0.9449	3.85644	-8.504	6.6137	-0.6930	4	
1	ME	110	3	8	-2.0329	3.98335	-9.840	5.7744	-1.4435	4	
1	ME	113	2	6	0.0982	3.60131	-6.960	7.1568	0.0668	4	
1	ME	113	3	6	-0.8544	4.32624	-9.334	7.6250	-0.4838	4	
1	ME	113	4	4	1.1021	1.83906	-2.502	4.7066	1.1985	2	
1	MA	1	1	19	-0.1200	6.50480	-12.869	12.6294	-0.0804	16	
1	MA	1	2	19	0.4728	5.04225	-9.410	10.3556	0.4088	16	
1	MA	1	3	10	1.2283	5.41781	-9.391	11.8472	0.7169	8	
1	NH	1	1	20	-1.4173	4.58381	-10.402	7.5670	-1.3827	18	
1	NH	1	2	21	-0.1517	5.40957	-10.754	10.4510	-0.1285	19	
1	NH	1	3	20	0.3771	5.20399	-9.823	10.5769	0.3240	18	
1	RI	1	1	19	-1.1002	5.48136	-11.844	9.6432	-0.8749	15	
1	RI	1	2	18	-0.9416	4.18021	-9.135	7.2516	-0.9557	14	
1	RI	1	3	8	-4.1062	2.33490	-8.683	0.4702	-4.9742	6	*
1	VT	1	1	11	-0.8356	3.87513	-8.431	6.7596	-0.7152	7	
1	VT	1	2	11	-1.0170	2.66197	-6.234	4.2004	-1.2671	7	
1	VT	1	3	11	-1.2196	2.90133	-6.906	4.4670	-1.3941	7	
2	NJ	1	1	40	0.4787	5.54286	-10.385	11.3427	0.5462	36	
2	NJ	1	2	40	-1.6104	4.66186	-10.748	7.5268	-2.1848	36	*
2	NJ	1	3	40	-1.9506	4.72570	-11.213	7.3118	-2.6105	36	*
2	NY	1	1	131	-0.5768	5.39504	-11.151	9.9975	-1.2237	127	
2	NY	1	2	131	-1.0815	4.87771	-10.642	8.4788	-2.5378	127	*
2	NY	1	3	131	-1.1182	5.26894	-11.445	9.2089	-2.4291	127	*
2	VQ	2	1	6	1.5771	2.35952	-3.048	6.2017	1.6372	3	
2	VQ	2	2	6	0.2506	1.64789	-2.979	3.4805	0.3725	3	
2	VQ	2	3	6	-2.2333	1.61182	-5.392	0.9259	-3.3939	3	*
2	VQ	2	4	6	-0.8551	1.38800	-3.576	1.8654	-1.5090	3	
3	DE	1	3	14	-0.5804	3.64135	-7.717	6.5567	-0.5963	10	
3	MD	1	1	10	-2.4209	3.77347	-9.817	4.9751	-2.0288	6	
3	MD	1	2	7	-2.6029	2.45576	-7.416	2.2104	-2.8042	3	
3	MD	1	3	7	-2.5265	2.75318	-7.923	2.8697	-2.4279	3	
3	MD	3	1	4	-3.3323	5.40555	-13.927	7.2626	-1.2329	2	

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TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	PA	1	1	39	-2.3432	6.3365	-14.763	10.0764	-2.3093	35	*
3	PA	1	2	34	-1.7941	5.8666	-13.293	9.7045	-1.7832	30	
3	PA	1	3	17	0.3749	5.2148	-9.846	10.5960	0.2964	13	
3	PA	2	1	41	1.2235	3.8273	-6.278	8.7250	2.0469	37	*
3	PA	2	2	15	0.2361	4.1278	-7.854	8.3266	0.2215	12	
3	PA	2	3	38	1.3491	3.8888	-6.273	8.9712	2.1386	34	*
3	PA	3	1	8	-4.4134	6.3585	-16.876	8.0492	-1.9632	4	
3	PA	3	2	7	-2.9091	4.4004	-11.534	5.7157	-1.7491	3	
3	PA	3	3	8	-1.1879	2.9270	-6.925	4.5490	-1.1479	4	
3	VA	1	1	6	-2.9193	4.5055	-11.750	5.9114	-1.5871	3	
3	VA	1	2	6	-2.1692	3.5576	-9.142	4.8037	-1.4935	3	
3	VA	1	3	6	-2.2606	3.1623	-8.459	3.9374	-1.7511	3	
3	VA	3	1	11	1.1657	6.8760	-12.311	14.6427	0.5623	8	
3	VA	3	2	8	3.0612	5.9790	-8.658	14.7800	1.4481	6	
3	VA	3	3	4	2.1467	2.3858	-2.529	6.8229	1.7996	2	
3	VA	815	1	17	0.8362	2.5378	-4.138	5.8103	1.3586	13	
3	VA	815	2	13	0.0524	4.4663	-8.702	8.8062	0.0423	9	
3	VA	815	3	17	0.2467	4.7701	-9.103	9.5961	0.2132	13	
3	WV	1	1	17	2.4056	7.7224	-12.730	17.5414	1.2844	13	
3	WV	1	2	16	0.2634	6.2091	-11.907	12.4333	0.1697	12	
3	WV	1	3	16	1.7401	6.1148	-10.245	13.7251	1.1383	12	
3	WV	2	1	24	3.5650	4.7748	-5.794	12.9237	3.6577	20	*
3	WV	2	2	24	0.1374	4.0248	-7.751	8.0259	0.1672	20	
3	WV	2	3	24	0.8663	3.4902	-5.974	7.7071	1.2160	20	
4	FL	2	2	4	0.3260	0.9303	-1.497	2.1494	0.7009	2	
4	FL	2	3	4	0.2451	1.1863	-2.080	2.5701	0.4132	2	
4	FL	3	1	4	-1.0935	1.7607	-4.545	2.3575	-1.2421	2	
4	FL	3	2	4	1.5593	3.3902	-5.085	8.2042	0.9199	2	
4	FL	3	3	4	2.3094	2.8668	-3.310	7.9283	1.6111	2	
4	FL	4	1	4	4.3995	5.3237	-6.035	14.8339	1.6528	2	
4	FL	4	2	4	5.0926	3.6737	-2.108	12.2930	2.7725	2	
4	FL	4	3	4	4.1931	2.7051	-1.109	9.4951	3.1002	2	
4	FL	11	1	8	-3.1922	2.0055	-7.123	0.7387	-4.5019	5	*
4	FL	11	2	8	-2.3993	2.4529	-7.207	2.4085	-2.7666	5	*
4	FL	11	3	8	0.0822	3.5312	-6.839	7.0034	0.0658	5	
4	FL	12	1	6	8.5002	6.7465	-4.723	21.7234	3.0862	4	*
4	FL	12	2	6	8.9209	11.0547	-12.746	30.5882	1.9767	4	
4	FL	12	3	6	10.6093	12.6617	-14.208	35.4263	2.0524	4	
4	FL	13	1	17	0.6388	5.5779	-10.294	11.5714	0.4722	14	
4	FL	13	2	16	0.8315	2.8949	-4.842	6.5054	1.1489	13	
4	FL	13	3	17	0.4014	1.6048	-2.744	3.5468	1.0314	14	
4	GA	10	1	5	-0.2812	3.2029	-6.559	5.9965	-0.1963	2	
4	GA	10	2	5	-0.5189	5.1659	-10.644	9.6062	-0.2246	2	
4	KY	1	1	28	-0.4047	5.3964	-10.982	10.1722	-0.3969	24	
4	KY	1	2	28	-2.9580	4.1023	-10.999	5.0826	-3.8154	24	*
4	KY	1	3	28	-4.4748	3.9274	-12.172	3.2230	-6.0290	24	*
4	KY	2	1	6	-1.9288	3.1046	-8.014	4.1562	-1.5218	3	
4	KY	2	2	6	0.7774	1.8249	-2.799	4.3542	1.0435	3	
4	KY	2	3	6	-0.8176	1.8086	-4.362	2.7272	-1.1074	3	
4	KY	3	1	7	-0.1564	3.5984	-7.209	6.8964	-0.1150	5	
4	KY	3	3	7	0.0543	2.5107	-4.867	4.9754	0.0573	5	
4	MS	100	1	8	-6.7456	5.8010	-18.116	4.6243	-3.2890	4	*
4	MS	100	2	8	-5.1976	3.2297	-11.528	1.1325	-4.5519	4	*

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
4	MS	100	3	7	-3.934	2.9037	-9.626	1.7568	-3.585	4	*
4	NC	1	1	19	-2.286	7.1696	-16.339	11.7662	-1.390	15	
4	NC	1	2	18	-2.755	5.0710	-12.695	7.1837	-2.305	14	*
4	NC	1	3	19	-0.664	6.6158	-13.631	12.3032	-0.437	15	
4	NC	2	1	8	-11.393	3.1599	-17.587	-5.1996	-10.198	4	*
4	NC	2	2	8	-7.048	5.0022	-16.852	2.7562	-3.985	4	*
4	NC	2	3	8	-6.452	3.5525	-13.415	0.5107	-5.137	4	*
4	SC	1	1	46	-0.094	8.3184	-16.398	16.2101	-0.077	42	
4	SC	1	2	38	0.069	4.2206	-8.219	8.3570	0.100	34	
4	SC	1	3	38	-1.172	4.8699	-10.717	8.3733	-1.483	34	
4	TN	1	1	8	-4.287	6.8242	-17.663	9.0879	-1.777	5	
4	TN	2	1	8	-2.474	8.6526	-19.433	14.4855	-0.809	5	
4	TN	2	2	6	-3.208	9.1475	-21.137	14.7206	-0.859	4	
4	TN	2	3	6	-2.772	8.7186	-19.860	14.3166	-0.779	4	
4	TN	3	1	6	2.946	2.2384	-1.441	7.3330	3.224	3	*
4	TN	3	2	6	2.448	2.9222	-3.279	8.1757	2.052	3	
4	TN	3	3	5	3.311	2.4807	-1.551	8.1728	2.984	3	
4	TN	6	1	28	1.577	5.0306	-8.283	11.4373	1.659	26	
4	TN	6	2	28	4.108	4.9153	-5.526	13.7419	4.422	26	*
4	TN	6	3	26	5.737	4.6402	-3.358	14.8319	6.304	24	*
5	IL	1	1	18	4.478	5.8558	-6.999	15.9558	3.245	14	*
5	IL	1	2	18	5.470	4.8756	-4.086	15.0262	4.760	14	*
5	IL	1	3	18	4.375	4.1389	-3.737	12.4876	4.485	14	*
5	IL	3	1	20	-8.425	7.4178	-22.963	6.1142	-5.079	16	*
5	IL	3	2	19	-5.673	5.4938	-16.440	5.0951	-4.501	15	*
5	IL	3	3	20	-6.565	4.0921	-14.586	1.4553	-7.175	16	*
5	IN	2	1	8	1.406	2.8980	-4.274	7.0863	1.372	4	
5	IN	2	2	8	0.375	3.4004	-6.290	7.0397	0.312	4	
5	IN	2	3	8	-0.680	3.7084	-7.949	6.5881	-0.519	4	
5	IN	5	1	9	-1.557	5.1511	-11.653	8.5392	-0.907	5	
5	IN	5	2	9	0.115	3.4177	-6.584	6.8133	0.101	5	
5	IN	5	3	9	-2.447	3.3674	-9.047	4.1535	-2.180	5	
5	IN	8	1	12	-0.879	3.0521	-6.861	5.1031	-0.998	8	
5	IN	8	2	12	-0.191	2.6338	-5.353	4.9709	-0.252	8	
5	IN	8	3	12	-1.080	2.4762	-5.933	3.7733	-1.511	8	
5	IN	10	1	8	7.544	6.3677	-4.936	20.0252	3.351	4	*
5	IN	10	2	6	8.529	9.0187	-9.147	26.2061	2.317	3	
5	IN	10	3	8	4.666	4.3230	-3.808	13.1388	3.053	4	*
5	IN	100	4	14	-2.634	2.7258	-7.977	2.7087	-3.616	11	*
5	MI	1	1	10	0.487	6.9872	-13.208	14.1817	0.220	6	
5	MI	1	2	9	3.589	6.6838	-9.512	16.6891	1.611	5	
5	MI	1	3	10	1.566	6.0364	-10.265	13.3978	0.821	6	
5	MI	2	1	9	-5.198	5.5631	-16.101	5.7062	-2.803	5	*
5	MI	2	2	7	0.225	6.5924	-12.696	13.1464	0.090	4	
5	MI	2	3	7	0.360	5.9851	-11.371	12.0904	0.159	4	
5	MN	1	1	13	-1.678	5.6331	-12.719	9.3630	-1.074	9	
5	MN	1	2	13	-0.974	4.6987	-10.184	8.2351	-0.748	9	
5	MN	1	3	13	-1.337	4.5599	-10.275	7.5998	-1.058	9	
5	OH	2	1	6	-4.396	3.7129	-11.673	2.8814	-2.900	3	
5	OH	2	2	6	-2.803	4.7988	-12.209	6.6026	-1.431	3	
5	OH	2	3	6	-2.464	4.5020	-11.288	6.3597	-1.341	3	
5	OH	3	1	4	-3.870	4.6117	-12.909	5.1690	-1.678	2	
5	OH	3	2	4	-4.510	8.0261	-20.241	11.2214	-1.124	2	

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
5	OH	3	3	4	-4.2817	10.2456	-24.363	15.7996	-0.8358	2	
5	OH	6	1	4	-8.1069	1.8965	-11.824	-4.3897	-8.5492	2	*
5	OH	6	2	4	-7.5576	3.1362	-13.705	-1.4105	-4.8195	2	*
5	OH	6	3	4	-7.5115	2.5898	-12.588	-2.4354	-5.8008	2	*
5	OH	8	1	8	-9.7437	8.0348	-25.492	6.0045	-3.4300	5	*
5	OH	8	2	8	-3.5215	5.8520	-14.991	7.9485	-1.7020	5	
5	OH	8	3	8	-3.4295	5.2529	-13.725	6.8661	-1.8466	5	
5	OH	9	1	8	-7.2585	7.6583	-22.269	7.7518	-2.6808	4	
5	OH	9	2	8	-6.5746	4.7992	-15.981	2.8319	-3.8747	4	*
5	OH	9	3	7	-6.4882	6.8526	-19.919	6.9429	-2.5051	4	
5	OH	10	1	4	-6.0984	5.7104	-17.291	5.0940	-2.1359	2	
5	OH	10	2	4	-5.2619	1.1292	-7.475	-3.0487	-9.3200	2	*
5	OH	10	3	4	-5.5593	2.4108	-10.285	-0.8341	-4.6120	2	*
5	OH	14	1	6	-9.2480	7.9395	-24.809	6.3135	-2.8532	4	*
5	OH	14	2	6	-4.5181	3.1488	-10.690	1.6534	-3.5148	4	*
5	OH	14	3	6	-3.2851	1.6338	-6.487	-0.0829	-4.9252	4	*
5	OH	15	1	4	2.9763	10.6652	-17.927	23.8800	0.5581	2	
5	OH	15	2	4	1.3821	10.6654	-19.522	22.2864	0.2592	2	
5	OH	15	3	4	1.6929	9.9129	-17.736	21.1222	0.3415	2	
5	WI	1	1	17	1.2770	4.0651	-6.691	9.2446	1.2952	13	
5	WI	1	2	13	0.3050	2.9535	-5.484	6.0939	0.3723	9	
5	WI	1	3	17	0.5502	2.5812	-4.509	5.6093	0.8788	13	
6	LA	1	1	22	0.3874	4.8441	-9.107	9.8819	0.3751	18	
6	LA	1	2	22	0.9591	4.3565	-7.580	9.4979	1.0326	18	
6	LA	1	3	22	-0.7153	4.6761	-9.881	8.4499	-0.7175	18	
6	NM	1	1	15	3.2470	7.2388	-10.941	17.4351	1.7373	12	
6	NM	1	2	15	1.8326	2.8930	-3.838	7.5029	2.4534	12	*
6	NM	1	3	10	-0.2773	3.7222	-7.573	7.0181	-0.2356	8	
6	OK	103	1	5	-2.8146	5.1572	-12.923	7.2934	-1.2204	2	
6	OK	103	2	5	-0.8935	3.7001	-8.146	6.3587	-0.5400	2	
6	OK	103	3	5	0.5979	3.7538	-6.760	7.9553	0.3561	2	
6	TX	1	1	13	-4.6282	9.9370	-24.105	14.8483	-1.6753	10	
6	TX	1	2	8	-6.8924	4.9455	-16.586	2.8008	-3.9419	6	*
6	TX	6	1	13	1.3974	6.7694	-11.871	14.6654	0.7443	10	
6	TX	6	2	9	0.9541	7.7505	-14.237	16.1452	0.3693	7	
7	IA	2	1	39	0.6434	4.0304	-7.256	8.5429	0.9969	35	
7	IA	3	1	7	-0.9158	2.3985	-5.617	3.7853	-1.0102	3	
7	IA	3	2	5	2.1038	6.2143	-10.076	14.2838	0.7570	2	
7	KS	1	2	4	0.4268	1.7030	-2.911	3.7647	0.5012	2	
7	MO	1	1	6	-9.3568	10.0137	-28.984	10.2701	-2.2888	3	
7	MO	1	2	5	-5.1467	6.5456	-17.976	7.6827	-1.7582	3	
7	MO	1	3	5	-5.0696	3.0324	-11.013	0.8738	-3.7384	3	*
7	MO	2	1	8	-5.2071	9.4552	-23.739	13.3251	-1.5577	4	
7	MO	2	2	8	-2.7677	2.4426	-7.555	2.0198	-3.2049	4	*
7	MO	2	3	8	-1.5521	1.7915	-5.063	1.9592	-2.4505	4	
7	MO	3	1	4	-2.0888	15.7620	-32.982	28.8047	-0.2650	2	
7	MO	3	3	4	3.4186	9.4251	-15.055	21.8918	0.7254	2	
7	MO	4	1	4	-2.0986	13.3481	-28.261	24.0636	-0.3144	2	
7	MO	4	2	4	-1.0389	8.3720	-17.448	15.3702	-0.2482	2	
7	MO	4	3	4	-1.3087	4.0358	-9.219	6.6015	-0.6486	2	
7	MO	5	1	4	-1.7437	11.4544	-24.194	20.7069	-0.3045	2	
7	MO	5	2	4	0.2297	7.3264	-14.130	14.5895	0.0627	2	
7	MO	5	3	4	-0.1766	9.6345	-19.060	18.7069	-0.0367	2	

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
8	CO	1	1	10	-4.995	5.24841	-15.282	5.2921	-3.0095	6	*
8	ND	1	1	7	1.250	5.95119	-10.414	12.9143	0.5557	4	
8	ND	1	2	7	-0.500	5.01664	-10.333	9.3326	-0.2637	4	
8	ND	1	3	7	-2.643	4.75274	-11.958	6.6725	-1.4712	4	
8	UT	1	1	13	1.341	5.58680	-9.609	12.2908	0.8652	10	
8	UT	1	2	13	0.364	4.38713	-8.235	8.9628	0.2991	10	
8	UT	1	3	12	0.353	4.29525	-8.066	8.7718	0.2848	9	
9	AZ	100	1	4	-7.541	4.78542	-16.920	1.8384	-3.1517	2	
9	CA	4	1	20	3.462	4.25691	-4.882	11.8051	3.6365	16	*
9	CA	4	2	20	4.590	4.05840	-3.364	12.5448	5.0583	16	*
9	CA	4	3	20	5.099	4.63673	-3.989	14.1865	4.9175	16	*
9	CA	4	4	11	7.849	3.03987	1.891	13.8073	8.5638	7	*
9	CA	36	1	7	1.660	3.20059	-4.613	7.9331	1.3722	4	
9	CA	36	2	7	-0.162	5.89730	-11.721	11.3966	-0.0727	4	
9	CA	36	3	7	-1.116	5.94524	-12.768	10.5370	-0.4965	4	
9	CA	61	1	7	-1.940	4.19614	-10.165	6.2844	-1.2233	5	
10	ID	1	2	8	-2.908	4.07446	-10.894	5.0780	-2.0186	4	
10	ID	1	3	8	0.446	3.39361	-6.205	7.0977	0.3719	4	
10	OR	1	1	6	-11.444	5.72967	-22.674	-0.2134	-4.8922	3	*
10	OR	1	2	6	-6.165	3.29486	-12.623	0.2925	-4.5835	3	*
10	OR	1	3	6	-4.808	1.76010	-8.257	-1.3579	-6.6907	3	*
10	WA	1	1	25	1.579	3.89069	-6.046	9.2052	2.0297	21	
10	WA	1	3	20	0.806	4.82292	-8.647	10.2589	0.7474	16	

POLLUTANT =TSP

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	CT	1	2	40	-1.2528	2.26774	-5.698	3.1919	-3.4940	38	*
1	ME	101	2	9	0.7096	5.49413	-10.059	11.4781	0.3874	6	
1	ME	104	2	11	-0.1442	2.63593	-5.311	5.0222	-0.1815	8	
1	ME	106	2	12	0.5954	1.74351	-2.822	4.0127	1.1830	9	
1	ME	108	2	6	-2.4774	2.01417	-6.425	1.4703	-3.0129	4	*
1	ME	110	2	6	-2.8184	0.85338	-4.491	-1.1458	-8.0899	3	*
1	MA	1	2	84	-1.0018	3.17672	-7.228	5.2246	-2.8902	80	*
1	NH	1	2	16	0.6041	2.93726	-5.153	6.3611	0.8227	14	
1	RI	1	2	50	-0.7425	2.88679	-6.401	4.9156	-1.8187	46	
1	VT	1	2	24	-0.6711	2.42890	-5.432	4.0895	-1.3536	20	
2	NJ	1	2	23	-2.0292	2.70792	-7.337	3.2783	-3.5938	19	*
2	NY	1	2	85	1.4851	2.35256	-3.126	6.0961	5.8199	81	*
3	DE	1	2	10	-3.7355	8.86192	-21.105	13.6339	-1.3330	6	
3	DC	1	2	9	0.7635	4.00949	-7.095	8.6221	0.5712	5	
3	MD	1	2	40	3.7199	5.01724	-6.114	13.5537	4.6892	36	*
3	MD	5	2	11	3.1771	3.10307	-2.905	9.2591	3.3957	7	*
3	MD	6	2	17	3.4602	4.14525	-4.664	11.5849	3.4417	13	*
3	PA	3	2	19	1.9692	5.74131	-9.284	13.2222	1.4951	15	
3	VA	1	2	56	-0.1441	3.58918	-7.179	6.8907	-0.3004	52	
3	VA	2	2	4	2.3320	1.42097	-0.453	5.1171	3.2823	2	
3	VA	3	2	13	-3.6588	5.20483	-13.860	6.5426	-2.5346	9	*
3	WV	1	2	16	-0.8432	5.00908	-10.661	8.9746	-0.6733	13	
3	WV	2	2	8	-0.2689	3.76156	-7.642	7.1037	-0.2022	5	

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TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =TSP

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
4	AL	11	2	19	2.6566	9.24212	-15.458	20.7711	1.2529	16	
4	AL	12	2	96	-0.3588	2.01954	-4.317	3.5994	-1.7410	92	
4	FL	1	2	10	1.6419	4.51181	-7.201	10.4850	1.1508	7	
4	FL	2	2	8	-1.1861	3.39701	-7.844	5.4720	-0.9876	5	
4	FL	4	2	9	3.0158	7.92147	-12.510	18.5419	1.1422	5	
4	FL	5	2	15	2.8481	6.16013	-9.226	14.9219	1.7906	12	
4	FL	6	2	6	1.3533	2.35808	-3.269	5.9752	1.4058	3	
4	FL	7	2	5	1.4614	1.44582	-1.372	4.2952	2.2602	3	
4	FL	13	2	26	-0.4458	3.30549	-6.925	6.0329	-0.6877	22	
4	FL	15	2	5	-0.1039	0.77524	-1.623	1.4156	-0.2996	3	
4	FL	16	2	9	-1.4759	1.87270	-5.146	2.1946	-2.3644	6	
4	FL	17	2	10	2.4536	3.64244	-4.686	9.5927	2.1301	7	
4	GA	10	2	46	3.9172	3.27651	-2.505	10.3391	8.1085	42	*
4	KY	2	2	8	4.3571	2.88867	-1.305	10.0189	4.2662	5	*
4	MS	100	2	16	-2.7921	4.00136	-10.635	5.0506	-2.7911	13	*
4	NC	2	2	12	-0.0798	3.11370	-6.183	6.0231	-0.0888	8	
4	NC	3	2	7	0.7863	6.04207	-11.056	12.6288	0.3443	4	
4	TN	1	2	61	2.7303	3.54728	-4.222	9.6829	6.0114	58	*
4	TN	2	2	19	-0.7321	2.13815	-4.923	3.4587	-1.4924	16	
4	TN	5	2	31	-0.1549	1.90795	-3.894	3.5847	-0.4520	27	
5	IL	1	2	60	0.9784	4.43616	-7.716	9.6733	1.7084	56	
5	IL	2	2	18	-0.4805	4.00299	-8.326	7.3654	-0.5093	14	
5	IL	3	2	43	-0.8030	4.51002	-9.643	8.0366	-1.1676	39	
5	IN	1	2	52	0.5473	2.34763	-4.054	5.1487	1.6812	48	
5	IN	2	2	48	-0.0801	2.15267	-4.299	4.1391	-0.2579	44	
5	IN	3	2	18	0.1292	0.82061	-1.479	1.7376	0.6678	14	
5	IN	5	2	32	0.0240	1.48872	-2.894	2.9419	0.0913	28	
5	IN	8	2	12	-0.9014	3.01606	-6.813	5.0101	-1.0353	9	
5	IN	9	2	15	-0.1012	2.36236	-4.731	4.5290	-0.1660	12	
5	IN	10	2	31	0.8156	3.38585	-5.821	7.4519	1.3413	27	
5	IN	100	2	157	-0.2891	2.70265	-5.586	5.0081	-1.3402	153	
5	MI	1	2	51	-0.1962	2.76089	-5.608	5.2151	-0.5076	47	
5	MI	2	2	18	1.5799	2.40456	-3.133	6.2929	2.7876	14	*
5	MN	1	2	70	0.2075	2.42566	-4.547	4.9618	0.7158	66	
5	OH	2	2	23	0.7145	5.12965	-9.340	10.7687	0.6680	20	
5	OH	3	2	17	-0.9926	2.84049	-6.560	4.5747	-1.4409	13	
5	OH	4	2	16	6.6584	5.13188	-3.400	16.7169	5.1898	12	*
5	OH	6	2	7	-6.4373	3.06634	-12.447	-0.4272	-5.5543	4	*
5	OH	7	2	9	-1.1367	1.45993	-3.998	1.7248	-2.3358	6	
5	OH	10	2	13	-4.1977	5.85719	-15.678	7.2824	-2.5840	9	*
5	OH	12	2	8	-4.0387	3.53591	-10.969	2.8917	-3.2306	5	*
5	OH	13	2	16	-5.2811	3.19769	-11.549	0.9864	-6.6061	12	*
5	OH	15	2	6	6.4374	1.43687	3.621	9.2536	10.9741	4	*
5	OH	16	2	10	-0.1377	2.47673	-4.992	4.7167	-0.1758	6	
5	WI	1	2	68	0.2606	3.21043	-6.032	6.5530	0.6693	64	
6	NM	1	2	72	0.9459	3.16529	-5.258	7.1499	2.5358	70	*
6	NM	2	2	16	-1.7586	4.03656	-9.670	6.1530	-1.7427	14	
6	OK	102	2	6	0.7107	2.02275	-3.254	4.6753	0.8606	4	
6	OK	103	2	8	-1.8769	4.43190	-10.563	6.8096	-1.1979	6	
6	TX	1	2	132	0.4277	3.29105	-6.023	6.8782	1.4932	129	
6	TX	3	2	35	2.0214	3.49478	-4.828	8.8712	3.4219	32	*
6	TX	5	2	17	1.0252	5.62184	-9.994	12.0440	0.7519	15	
6	TX	6	2	39	-2.6914	2.88103	-8.338	2.9554	-5.8340	36	*

TABLE D-1A. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND EQUAL MEANS ACROSS QUARTERS BY LEVEL

POLLUTANT =TSP

REGION	STATE	REPORTING ORGANIZATION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
7	KS	1	2	21	-2.9967	4.93979	-12.679	6.68533	-2.7800	17	*
7	MO	1	2	11	0.4496	3.67999	-6.763	7.66233	0.4052	7	
7	MO	2	2	8	-1.5806	2.24664	-5.984	2.82282	-1.9899	4	
7	MO	3	2	7	-2.8110	2.06951	-6.867	1.24526	-3.5937	4	*
7	MO	4	2	12	-0.7109	1.56799	-3.784	2.36238	-1.5705	8	
7	MO	5	2	9	-0.5179	2.33458	-5.094	4.05787	-0.6655	5	
7	NE	2	2	4	0.2192	4.82844	-9.245	9.68294	0.0908	2	
7	NE	3	2	19	0.4240	2.40517	-4.290	5.13814	0.7684	15	
8	ND	1	2	5	-0.3335	0.51167	-1.336	0.66937	-1.4575	2	
8	WY	1	2	16	2.8106	0.88930	1.068	4.55359	12.6417	12	*
9	AZ	200	2	22	0.0290	4.60971	-9.006	9.06399	0.0295	20	
9	CA	36	2	4	2.9572	2.03749	-1.036	6.95064	2.9028	2	
9	CA	61	2	9	-3.2082	5.91417	-14.800	8.38360	-1.6274	7	
9	NV	100	2	5	-2.7240	4.50775	-11.559	6.11115	-1.3513	3	
10	WA	1	2	75	0.1111	4.76482	-9.228	9.45012	0.2019	71	

TABLE D-1B. REPORTING ORGANIZATIONS WITH HOMOGENEOUS BETWEEN-SITE VARIANCE ACROSS QUARTERS AND LEVELS

TABLE D-1B. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND ACROSS QUARTERS AND LEVELS

POLLUTANT =CO

REGION	STATE	REPORTING ORGANIZATION	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	ME	1	12	-3.8849	0.96115	4.1917	-12.101	4.3309	-3.2105	6	*
1	MA	1	38	1.1358	1.01136	2.6231	-4.005	6.2770	2.6692	27	*
1	NH	1	8	-2.7221	0.97278	1.7919	-6.234	0.7899	-4.2968	4	*
1	RI	1	26	2.5839	1.02584	1.9498	-1.238	6.4055	6.7575	18	*
1	VT	1	12	-2.1394	0.97861	2.8519	-7.729	3.4504	-2.5986	6	*
2	NJ	1	58	0.5174	1.00517	5.4274	-10.120	11.1552	0.7260	48	
3	PA	2	26	0.3000	1.00300	1.4083	-2.460	3.0603	1.0861	16	
3	PA	3	16	0.4507	1.00451	4.0928	-7.571	8.4727	0.4405	8	
3	VA	1	21	-2.5122	0.97488	1.3005	-5.061	0.0368	-8.8522	9	*
3	WV	1	21	-2.0602	0.97940	10.3851	-22.415	18.2946	-0.9091	12	
3	WV	2	24	-5.5069	0.94493	4.5962	-14.515	3.5018	-5.8696	12	*
4	FL	11	24	0.4672	1.00467	2.8958	-5.209	6.1430	0.7904	18	
4	FL	12	12	0.0095	1.00009	2.2157	-4.333	4.3522	0.0148	6	
4	FL	16	9	1.0882	1.01088	3.5022	-5.776	7.9526	0.9322	4	
4	FL	17	29	-0.5471	0.99453	4.1816	-8.743	7.6489	-0.7046	18	
4	GA	10	8	0.6163	1.00616	4.9737	-9.132	10.3647	0.3505	4	
4	KY	2	26	-0.8920	0.99108	2.0676	-4.945	3.1605	-2.1999	18	*
4	MS	100	12	-4.4986	0.95501	2.1453	-8.703	-0.2937	-7.2639	6	*
4	NC	2	27	0.7197	1.00720	2.6231	-4.422	5.8610	1.4256	15	
5	IL	1	14	2.6005	1.02601	3.4121	-4.087	9.2883	2.8517	8	*
5	IL	3	33	-1.4102	0.98590	3.2835	-7.846	5.0254	-2.4672	21	*
5	IN	8	36	0.8206	1.00821	1.4668	-2.054	3.6955	3.3569	24	*
5	MI	1	24	-0.8240	0.99176	3.8129	-8.297	6.6494	-1.0587	12	
5	MI	2	19	-3.3616	0.96638	7.1201	-17.317	10.5939	-2.0579	9	
5	OH	1	9	-0.2795	0.99720	9.3112	-18.530	17.9705	-0.0901	5	
5	OH	8	8	2.3119	1.02312	5.5660	-8.597	13.2213	1.1748	4	
5	OH	9	12	-4.0768	0.95923	2.4402	-8.860	0.7060	-5.7874	6	*
5	OH	12	12	3.3486	1.03349	7.2504	-10.862	17.5594	1.5999	6	
5	OH	15	8	-4.9167	0.95083	2.7350	-10.277	0.4439	-5.0847	4	*
5	WI	1	30	1.8564	1.01856	3.0798	-4.180	7.8928	3.3015	18	*
6	LA	1	23	-0.3079	0.99692	5.4684	-11.026	10.4101	-0.2701	15	
6	NM	2	35	-2.0618	0.97938	6.0082	-13.838	9.7142	-2.0302	27	
6	OK	101	10	-1.9410	0.98059	3.8187	-9.426	5.5437	-1.6073	4	
6	OK	103	17	0.1601	1.00160	3.5504	-6.799	7.1189	0.1859	8	
6	TX	1	16	1.2727	1.01273	7.0886	-12.621	15.1663	0.7182	11	
6	TX	2	20	2.8082	1.02808	4.4103	-5.836	11.4524	2.8476	15	*
7	IA	1	20	-0.0254	0.99975	4.0707	-8.004	7.9532	-0.0279	10	
7	IA	2	33	-0.9150	0.99085	1.7151	-4.277	2.4466	-3.0648	21	*
7	IA	3	8	-6.3143	0.93686	7.3968	-20.812	8.1835	-2.4145	4	
7	KS	1	16	-3.9140	0.96086	16.2541	-35.772	27.9441	-0.9632	8	
7	MO	2	24	0.4593	1.00459	3.2383	-5.888	6.8064	0.6948	12	
7	MO	3	8	5.3328	1.05333	3.0442	-0.634	11.2995	4.9548	4	*
7	MO	4	11	3.7515	1.03751	7.2496	-10.458	17.9607	1.7163	6	
7	MO	5	12	4.0983	1.04098	3.0673	-1.913	10.1102	4.6286	6	*
7	NE	2	22	1.0820	1.01082	4.6634	-8.058	10.2223	1.0882	11	
8	CO	1	32	10.0238	1.10024	10.0311	-9.637	29.6848	5.6527	25	*
8	MT	1	22	2.8250	1.02825	7.7468	-12.359	18.0088	1.7104	11	
9	CA	36	27	-0.1691	0.99831	1.9742	-4.038	3.7003	-0.4450	15	
9	CA	61	30	4.2773	1.04277	2.6206	-0.859	9.4137	8.9400	24	*

TABLE D-1B. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND ACROSS QUARTERS AND LEVELS

POLLUTANT =NO2

REGION	STATE	REPORTING ORGANIZATION	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	MA	1	22	-0.3222	0.99678	7.9466	-15.898	15.2532	-0.1902	14	
1	RI	1	11	1.6231	1.01623	7.3639	-12.810	16.0563	0.7310	5	
1	VT	1	12	-1.4339	0.98566	2.9625	-7.240	4.3726	-1.6767	6	
2	NJ	1	21	2.1265	1.02126	5.2305	-8.125	12.3782	1.8631	15	
3	DE	1	17	1.2125	1.01212	6.7278	-11.974	14.3990	0.7431	10	
3	MD	1	11	1.6935	1.01694	5.8792	-9.830	13.2168	0.9554	5	
3	PA	1	61	2.2497	1.02250	5.6692	-8.862	13.3613	3.0993	49	*
3	PA	2	13	5.5748	1.05575	2.6921	0.298	10.8513	7.4664	6	*
3	PA	3	22	1.0512	1.01051	2.1822	-3.226	5.3283	2.2593	11	*
3	VA	1	10	4.2393	1.04239	2.3311	-0.330	8.8083	5.7508	4	*
3	VA	3	10	-0.1872	0.99813	2.4587	-5.006	4.6319	-0.2408	4	
3	WV	2	23	4.0061	1.04006	5.8922	-7.543	15.5549	3.2607	11	*
4	FL	11	12	2.4672	1.02467	2.3160	-2.072	7.0065	3.6902	6	*
4	FL	16	8	-7.2603	0.92740	8.9885	-24.878	10.3572	-2.2846	4	
4	GA	10	8	0.3982	1.00398	5.0880	-9.574	10.3706	0.2213	4	
4	NC	2	20	0.0431	1.00043	10.2911	-20.127	20.2136	0.0187	10	
5	IL	1	12	-3.5250	0.96475	2.9759	-9.358	2.3078	-4.1032	6	*
5	IL	3	30	0.2801	1.00280	5.7748	-11.039	11.5988	0.2657	18	
5	IN	1	47	-1.2064	0.98794	4.6200	-10.262	7.8487	-1.7903	35	
5	IN	8	12	-0.2077	0.99792	1.8083	-3.752	3.3366	-0.3979	6	
5	OH	8	12	3.4223	1.03422	8.8420	-13.908	20.7527	1.3408	6	
5	OH	9	12	-8.5889	0.91411	12.9103	-33.893	16.7154	-2.3046	6	
5	WI	1	10	-2.4646	0.97535	4.4823	-11.250	6.3207	-1.7388	4	
6	LA	1	24	-2.8381	0.97162	2.7053	-8.141	2.4643	-5.1394	12	*
6	OK	103	18	2.5640	1.02564	7.8594	-12.840	17.9683	1.3841	9	
6	TX	1	10	2.6154	1.02615	13.5263	-23.896	29.1268	0.6114	6	
6	TX	2	14	-1.5229	0.98477	7.0006	-15.244	12.1983	-0.8140	8	
7	MO	2	24	-3.6428	0.96357	7.6271	-18.592	11.3064	-2.3398	12	*
7	MO	3	12	0.6372	1.00637	4.3212	-7.832	9.1067	0.5108	6	
8	CO	1	27	-7.4580	0.92542	7.7458	-22.640	7.7239	-5.0030	15	*
9	CA	4	78	-0.9887	0.99011	4.2692	-9.356	7.3791	-2.0452	66	*
9	CA	36	27	0.5747	1.00575	5.4203	-10.049	11.1985	0.5510	15	
9	CA	61	30	-7.8292	0.92171	7.2457	-22.031	6.3723	-5.9184	24	*
10	OR	1	18	-3.1137	0.96886	7.0116	-16.856	10.6291	-1.8840	9	

POLLUTANT =03

REGION	STATE	REPORTING ORGANIZATION	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	CT	1	22	-1.8803	0.98120	3.4369	-8.617	4.8560	-2.5661	18	*
1	MA	1	59	-3.1518	0.96848	3.1530	-9.332	3.0280	-7.6784	48	*
1	RI	1	14	1.9598	1.01960	2.8795	-3.684	7.6035	2.5466	10	*
1	VT	1	18	-1.3619	0.98638	4.6683	-10.512	7.7880	-1.2377	9	
2	NJ	1	132	-0.1696	0.99830	5.3922	-10.738	10.3992	-0.3614	120	
3	MD	1	60	0.6707	1.00671	2.8291	-4.874	6.2157	1.8364	48	
3	MD	3	8	-1.6104	0.98390	3.7374	-8.936	5.7149	-1.2188	4	
3	MD	5	24	0.6472	1.00647	2.1182	-3.504	4.7989	1.4969	15	
3	PA	1	99	0.2482	1.00248	4.1304	-7.848	8.3438	0.5978	87	
3	PA	2	39	-0.3436	0.99656	2.8724	-5.974	5.2864	-0.7469	30	
3	PA	3	24	-2.0079	0.97992	2.3769	-6.667	2.6509	-4.1383	12	*
3	VA	3	16	-1.2976	0.98702	5.3278	-11.740	9.1450	-0.9742	8	

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TABLE D-1B. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND ACROSS QUARTERS AND LEVELS

POLLUTANT =03

REGION	STATE	REPORTING ORGANIZATION	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	VA	815	70	-0.2780	0.99722	2.4140	-5.009	4.4534	-0.9635	58	
3	WV	1	36	-2.5826	0.97417	3.1538	-8.764	3.5989	-4.9132	24	*
4	AL	12	30	-5.4275	0.94573	5.9915	-17.171	6.3159	-4.9616	21	*
4	FL	1	14	0.0626	1.00063	1.7253	-3.319	3.4442	0.1359	8	
4	FL	3	12	0.4355	1.00435	2.8777	-5.205	6.0758	0.5242	6	
4	FL	11	15	-0.4226	0.99577	3.1686	-6.633	5.7878	-0.5166	6	
4	FL	12	12	5.5621	1.05562	5.3890	-5.000	16.1246	3.5753	6	*
4	FL	13	42	0.4392	1.00439	2.6499	-4.755	5.6331	1.0741	30	
4	FL	14	12	2.1319	1.02132	3.0301	-3.807	8.0708	2.4372	6	
4	FL	16	18	-0.6580	0.99342	3.1273	-6.788	5.4716	-0.8927	9	
4	FL	17	15	-4.9185	0.95082	8.7449	-22.058	12.2215	-2.1783	6	
4	FL	18	15	-2.1984	0.97802	3.1052	-8.285	3.8879	-2.7419	6	*
4	GA	10	18	-2.0867	0.97913	3.5456	-9.036	4.8628	-2.4969	12	*
4	KY	1	102	-0.5149	0.99485	6.7323	-13.710	12.6805	-0.7724	93	
4	KY	2	24	-0.8028	0.99197	3.9562	-8.557	6.9514	-0.9941	12	
4	MS	100	33	-1.0485	0.98952	2.3180	-5.592	3.4948	-2.5984	21	*
4	NC	2	18	-0.8721	0.99128	3.4027	-7.541	5.7973	-1.0874	9	
4	TN	1	10	1.6121	1.01612	3.3228	-4.901	8.1247	1.5342	6	
4	TN	2	18	-1.8720	0.98128	2.1058	-5.999	2.2553	-3.7717	12	*
4	TN	3	30	2.7370	1.02737	9.0332	-14.968	20.4421	1.6596	21	
4	TN	5	36	1.8310	1.01831	2.6032	-3.271	6.9333	4.2201	27	*
5	IL	3	62	-2.1146	0.97885	4.8084	-11.539	7.3098	-3.4627	53	*
5	IN	1	54	-0.7121	0.99288	3.9571	-8.468	7.0439	-1.3223	50	
5	IN	2	12	-2.7708	0.97229	2.8786	-8.413	2.8713	-3.3344	6	*
5	IN	3	16	0.7736	1.00774	2.4479	-4.024	5.5715	1.2642	12	
5	IN	8	33	-0.5384	0.99462	4.5334	-9.424	8.3470	-0.6823	27	
5	IN	100	60	-0.7833	0.99217	5.0819	-10.744	9.1773	-1.1939	54	
5	MI	1	45	-1.8349	0.98165	4.4754	-10.607	6.9369	-2.7504	36	*
5	MI	2	8	0.8918	1.00892	5.8690	-10.611	12.3951	0.4298	4	
5	MN	1	30	1.3062	1.01306	3.8813	-6.301	8.9135	1.8433	18	
5	OH	1	9	-7.1488	0.92851	10.4428	-27.617	13.3191	-2.0537	5	
5	OH	14	8	1.1409	1.01141	4.6256	-7.925	10.2071	0.6976	4	
6	AR	1	8	0.9105	1.00911	1.8037	-2.625	4.4457	1.4278	4	
6	NM	1	24	-2.0492	0.97951	6.3818	-14.558	10.4591	-1.5731	16	
6	OK	103	20	-2.5713	0.97429	2.5164	-7.503	2.3608	-4.5697	11	*
6	TX	2	25	0.6587	1.00659	3.1414	-5.498	6.8158	1.0484	20	
6	TX	6	28	-3.1433	0.96857	3.4021	-9.811	3.5249	-4.8889	23	*
7	IA	1	17	-1.3075	0.98693	1.7925	-4.821	2.2058	-3.0075	8	*
7	IA	3	12	-0.0179	0.99982	1.8528	-3.650	3.6136	-0.0335	6	
7	KS	1	21	-0.0774	0.99923	3.2223	-6.393	6.2383	-0.1101	9	
7	MO	1	24	0.7438	1.00744	5.2104	-9.469	10.9563	0.6994	12	
7	MO	4	12	2.2029	1.02203	5.5246	-8.625	13.0311	1.3813	6	
7	MO	5	12	2.7379	1.02738	2.8819	-2.911	8.3866	3.2910	6	*
8	UT	1	41	-1.1872	0.98813	2.8188	-6.712	4.3376	-2.6969	29	*
10	OR	1	27	1.7854	1.01785	4.4519	-6.940	10.5111	2.0839	18	
10	WA	1	22	0.0477	1.00048	1.8226	-3.525	3.6200	0.1226	15	

TABLE D-1B. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND ACROSS QUARTERS AND LEVELS

POLLUTANT =PB

REGION	STATE	REPORTING ORGANIZATION	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	CT	1	12	-2.4487	0.97551	2.6220	-7.588	2.6904	-3.235	8	*
1	MA	1	22	-1.5909	0.98409	6.2808	-13.901	10.7195	-1.188	14	
1	NH	1	12	9.2778	1.09278	11.5334	-13.328	31.8832	2.787	8	*
1	RI	1	24	-0.8064	0.99194	4.5257	-9.677	8.0640	-0.873	16	
2	NJ	1	8	4.0937	1.04094	0.8149	2.497	5.6910	14.209	4	*
2	NY	1	56	-2.2510	0.97749	3.5936	-9.294	4.7925	-4.687	48	*
3	PA	3	24	1.2746	1.01275	3.8234	-6.219	8.7685	1.633	16	
3	VA	3	48	0.0648	1.00065	1.6387	-3.147	3.2767	0.274	40	
3	WV	1	32	-2.1670	0.97833	1.3989	-4.909	0.5747	-8.763	26	*
4	AL	11	20	-0.7689	0.99231	4.4120	-9.416	7.8786	-0.779	12	
4	AL	12	24	-1.1600	0.98840	3.8894	-8.783	6.4632	-1.461	16	
4	FL	11	28	-0.9209	0.99079	3.6876	-8.149	6.3069	-1.321	20	
4	FL	13	18	1.1054	1.01105	1.8741	-2.568	4.7786	2.502	12	*
4	FL	17	15	-3.2579	0.96742	5.8627	-14.749	8.2329	-2.152	10	
4	FL	18	21	0.4113	1.00411	12.9181	-24.908	25.7309	0.146	13	
4	GA	10	20	1.5357	1.01536	3.2017	-4.740	7.8111	2.145	14	*
4	KY	1	12	-1.0401	0.98960	2.6524	-6.239	4.1585	-1.358	8	
4	SC	1	9	0.8884	1.00888	2.7162	-4.435	6.2121	0.981	5	
4	TN	1	14	-2.0599	0.97940	1.4785	-4.958	0.8379	-5.213	8	*
5	IL	1	18	1.2963	1.01296	2.5285	-3.659	6.2521	2.175	12	
5	IL	3	18	0.1622	1.00162	2.0043	-3.766	4.0906	0.343	12	
5	IN	1	24	3.0408	1.03041	3.7879	-4.383	10.4650	3.933	16	*
5	IN	8	24	3.0408	1.03041	3.7879	-4.383	10.4650	3.933	16	*
5	IN	100	24	3.0408	1.03041	3.7879	-4.383	10.4650	3.933	16	*
5	MI	1	26	1.4071	1.01407	2.3982	-3.293	6.1074	2.992	18	*
6	TX	3	16	-3.3187	0.96681	0.8997	-5.082	-1.5553	-14.754	10	*
7	MO	2	29	-0.2084	0.99792	1.7521	-3.642	3.2257	-0.640	23	
7	MO	4	21	-4.4130	0.95587	6.9297	-17.995	9.1692	-2.918	14	*
7	NE	3	12	-3.6423	0.96358	3.7114	-10.917	3.6321	-3.400	8	*
9	CA	4	18	-1.5887	0.98411	1.5635	-4.653	1.4757	-4.311	12	*

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	CT	1	22	1.7175	1.01717	3.5948	-5.328	8.7633	2.241	18	*
1	ME	104	24	-0.9455	0.99054	5.0453	-10.834	8.9433	-0.918	17	
1	ME	110	16	-1.4889	0.98511	3.9204	-9.173	6.1951	-1.519	8	
1	ME	113	16	-0.0081	0.99992	3.6539	-7.170	7.1535	-0.009	10	
1	MA	1	48	0.3955	1.00396	5.7415	-10.858	11.6489	0.477	40	
1	NH	1	61	-0.3933	0.99607	5.0842	-10.358	9.5717	-0.604	55	
1	RI	1	45	-1.5712	0.98429	4.5608	-10.510	7.3680	-2.311	35	*
1	VT	1	33	-1.0241	0.98976	3.1896	-7.276	5.2275	-1.844	21	
2	NY	1	393	-0.9255	0.99074	5.1852	-11.089	9.2376	-3.538	381	*
2	VQ	2	24	-0.3152	0.99685	1.7894	-3.822	3.1920	-0.863	12	
3	MD	1	24	-2.5048	0.97495	3.2438	-8.863	3.8531	-3.783	12	*
3	PA	2	94	1.1167	1.01117	3.8972	-6.522	8.7553	2.778	83	*
3	PA	3	23	-2.8337	0.97166	4.8061	-12.254	6.5862	-2.828	11	*
3	VA	1	18	-2.4497	0.97550	3.7840	-9.866	4.9669	-2.747	9	*
3	VA	3	23	1.9956	1.01996	6.1447	-10.048	14.0392	1.558	16	
3	VA	815	47	0.4062	1.00406	3.9966	-7.427	8.2396	0.697	35	

TABLE D-1B. REPORTING ORGANIZATIONS WITH HOMOGENOUS BETWEEN-SITE VARIANCE AND ACROSS QUARTERS AND LEVELS

POLLUTANT =SO2

REGION	STATE	REPORTING ORGANIZATION	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	WV	1	49	1.4888	1.01489	6.7515	-11.744	14.7218	1.544	37	
4	FL	2	8	0.2855	1.00286	1.0660	-1.804	2.3749	0.758	4	
4	FL	3	12	0.9250	1.00925	2.7576	-4.480	6.3299	1.162	6	
4	FL	4	12	4.5617	1.04562	4.0478	-3.372	12.4955	3.904	6	*
4	FL	11	24	-1.8364	0.98164	2.7391	-7.205	3.5323	-3.284	15	*
4	FL	12	18	9.3435	1.09344	10.4569	-11.152	29.8390	3.791	12	*
4	GA	10	10	-0.4001	0.99600	4.2980	-8.824	8.0240	-0.294	4	
4	KY	2	18	-0.6563	0.99344	2.3266	-5.217	3.9039	-1.197	9	
4	KY	3	14	-0.0510	0.99949	3.1026	-6.132	6.0300	-0.062	10	
4	MS	100	23	-5.3516	0.94648	4.1838	-13.552	2.8487	-6.134	12	*
4	NC	1	56	-1.8866	0.98113	6.3739	-14.380	10.6063	-2.215	44	*
4	NC	2	24	-8.2978	0.91702	3.9844	-16.107	-0.4883	-10.202	12	*
4	TN	2	20	-2.7836	0.97216	8.8279	-20.086	14.5190	-1.410	13	
4	TN	3	17	2.8776	1.02878	2.5627	-2.145	7.9005	4.630	9	*
4	TN	6	82	3.7603	1.03760	4.8706	-5.786	13.3067	6.991	76	*
5	IL	1	54	4.7746	1.04775	5.0064	-5.038	14.5872	7.008	42	*
5	IL	3	59	-6.9081	0.93092	5.8365	-18.348	4.5314	-9.091	47	*
5	IN	2	24	0.3669	1.00367	3.3523	-6.204	6.9374	0.536	12	
5	IN	5	27	-1.2963	0.98704	4.0642	-9.262	6.6696	-1.657	15	
5	IN	8	36	-0.7167	0.99283	2.7315	-6.070	4.6370	-1.574	24	
5	IN	10	22	6.7662	1.06766	6.6124	-6.194	19.7265	4.800	11	*
5	MI	1	29	1.8217	1.01822	6.5750	-11.065	14.7088	1.492	17	
5	MI	2	23	-1.8558	0.98144	6.0247	-13.664	9.9527	-1.477	13	
5	MN	1	39	-1.3299	0.98670	4.9867	-11.104	8.4441	-1.665	27	
5	OH	2	18	-3.2210	0.96779	4.3620	-11.771	5.3286	-3.133	9	*
5	OH	3	12	-4.2204	0.95780	7.9720	-19.846	11.4046	-1.834	6	
5	OH	6	12	-7.7253	0.92275	2.5910	-12.804	-2.6469	-10.328	6	*
5	OH	8	24	-5.5649	0.94435	6.4909	-18.287	7.1573	-4.200	15	*
5	OH	9	23	-6.7862	0.93214	6.5483	-19.621	6.0485	-4.970	12	*
5	OH	10	12	-5.6399	0.94360	3.6376	-12.769	1.4898	-5.371	6	*
5	OH	15	12	2.0171	1.02017	10.4205	-18.407	22.4413	0.671	6	
5	WI	1	47	0.7452	1.00745	3.2948	-5.713	7.2030	1.551	35	
6	LA	1	66	0.2104	1.00210	4.6300	-8.864	9.2852	0.369	54	
6	OK	103	15	-1.0367	0.98963	4.2575	-9.381	7.3079	-0.943	6	
6	TX	1	21	-5.4908	0.94509	8.4194	-21.993	11.0113	-2.989	16	*
6	TX	6	22	1.2161	1.01216	7.1896	-12.876	15.3077	0.793	17	
7	IA	3	12	0.3424	1.00342	4.3473	-8.178	8.8630	0.273	5	
7	MO	1	16	-6.7014	0.93299	7.1254	-20.667	7.2644	-3.762	9	*
7	MO	2	24	-3.1757	0.96824	5.7323	-14.411	8.0596	-2.714	12	*
7	MO	3	8	0.6649	1.00665	12.9860	-24.788	26.1175	0.145	4	
7	MO	4	12	-1.4821	0.98518	9.3906	-19.888	16.9235	-0.547	6	
7	MO	5	12	-0.5635	0.99436	9.6212	-19.421	18.2940	-0.203	6	
8	ND	1	21	-0.6310	0.99369	5.2654	-10.951	9.6891	-0.549	12	
8	UT	1	38	0.6947	1.00695	4.8089	-8.731	10.1201	0.890	29	
9	CA	4	71	4.9204	1.04920	4.1825	-3.277	13.1182	9.913	55	*
9	CA	36	21	0.1274	1.00127	5.1758	-10.017	10.2720	0.113	12	
10	ID	1	16	-1.2309	0.98769	3.7495	-8.580	6.1182	-1.313	8	
10	OR	1	18	-7.4722	0.92528	3.9490	-15.212	0.2678	-8.028	9	*
10	WA	1	45	1.2357	1.01236	4.3186	-7.229	9.7001	1.919	37	

TABLE D-2A. STATES WITH HOMOGENEOUS VARIANCE AND EQUAL MEANS ACROSS REPORTING ORGANIZATIONS AND QUARTERS BY LEVELS

TABLE D-2A. STATES WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS REPORTING ORGANIZATIONS AND QUARTERS BY LEVEL

POLLUTANT =CO

REGION	STATE	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	PA	1	50	-1.1704	4.6574	-10.299	7.9581	-1.777	38	
3	PA	3	26	-0.4994	2.5831	-5.562	4.5635	-0.986	19	
3	VA	2	14	-1.3354	2.5338	-6.302	3.6308	-1.972	7	
3	WV	1	16	-1.0371	12.0505	-24.656	22.5819	-0.344	9	
3	WV	2	15	-5.2047	5.1628	-15.324	4.9144	-3.904	8	*
3	WV	3	14	-5.7689	1.9832	-9.656	-1.8819	-10.884	7	*
4	FL	1	37	0.3573	6.6622	-12.701	13.4151	0.326	24	
4	FL	2	34	0.0852	2.4021	-4.623	4.7932	0.207	21	
4	FL	3	42	0.7475	2.2292	-3.622	5.1167	2.173	26	*
4	KY	2	24	0.5607	1.8864	-3.137	4.2580	1.456	17	
4	NC	2	30	-0.3612	2.2769	-4.824	4.1015	-0.869	22	
4	NC	3	30	0.1798	1.9735	-3.688	4.0479	0.499	22	
4	TN	1	39	0.3489	2.0643	-3.697	4.3950	1.056	32	
4	TN	3	39	-0.2726	1.8289	-3.857	3.3120	-0.931	32	
5	IL	2	18	0.7356	2.8662	-4.882	6.3533	1.089	11	
5	IL	3	18	1.1461	2.6604	-4.068	6.3604	1.828	11	
5	IN	1	33	-0.2982	6.0976	-12.250	11.6532	-0.281	21	
5	IN	3	25	1.9910	1.7070	-1.355	5.3367	5.832	17	*
5	MI	1	15	-2.5869	8.1222	-18.506	13.3327	-1.234	7	
5	MI	2	14	-0.9174	3.5039	-7.785	5.9502	-0.980	7	
5	MI	3	14	-2.2857	3.4434	-9.035	4.4633	-2.484	7	*
5	OH	1	21	-2.7270	6.7487	-15.954	10.5005	-1.852	11	
5	OH	2	8	2.0117	5.9123	-9.577	13.5999	0.962	4	
5	OH	3	20	0.4539	5.4558	-10.240	11.1474	0.372	10	
6	NM	2	22	0.0772	5.7529	-11.198	11.3529	0.063	16	
6	NM	3	15	-1.7815	5.7862	-13.122	9.5595	-1.192	11	
6	OK	1	11	0.6514	5.1238	-9.391	10.6940	0.422	5	
6	OK	2	11	-2.2820	2.1792	-6.553	1.9893	-3.473	5	*
6	TX	1	22	2.2742	6.5747	-10.612	15.1605	1.622	16	
6	TX	2	14	1.8926	3.9098	-5.771	9.5558	1.811	10	
7	IA	1	12	-3.0748	6.6379	-16.085	9.9356	-1.605	6	
7	IA	2	8	-2.5351	4.6008	-11.553	6.4825	-1.559	4	
7	IA	3	19	0.1079	1.9434	-3.701	3.9168	0.242	11	
7	MO	2	12	2.2164	2.3541	-2.398	6.8305	3.261	6	*
7	MO	3	20	3.8022	2.9351	-1.951	9.5550	5.793	10	*
9	CA	3	40	-0.5933	1.5105	-3.554	2.3672	-2.484	32	*

POLLUTANT =NO2

REGION	STATE	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	MD	1	10	2.0943	6.7526	-11.141	15.3294	0.9808	5	
3	PA	2	27	2.0966	5.3845	-8.457	12.6503	2.0233	16	
3	PA	3	26	2.2393	4.9977	-7.556	12.0348	2.2847	19	*
3	VA	3	10	0.6962	2.7994	-4.791	6.1831	0.7864	4	
3	WV	2	18	4.4407	4.1627	-3.718	12.5996	4.5260	10	*
3	WV	3	17	1.6937	2.9811	-4.149	7.5365	2.3425	9	*
4	FL	1	12	3.8608	13.1752	-21.963	29.6842	1.0151	6	
4	FL	2	8	-2.3792	5.6592	-13.471	8.7129	-1.1891	4	
5	IL	2	14	-0.7328	4.1445	-8.856	7.3905	-0.6615	8	
5	IL	3	14	-0.7432	4.4049	-9.377	7.8904	-0.6313	8	

TABLE D-2A. STATES WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS REPORTING ORGANIZATIONS AND QUARTERS BY LEVEL

POLLUTANT =NO2

REGION	STATE	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
5	OH	1	8	-3.2343	14.0959	-30.862	24.3938	-0.6490	4	
5	OH	2	8	-2.2008	9.1893	-20.212	15.8102	-0.6774	4	
5	OH	3	8	-2.3148	9.1733	-20.295	15.6649	-0.7137	4	
6	TX	1	12	0.7412	13.7351	-26.180	27.6620	0.1869	7	
7	MO	1	16	-2.1482	12.5558	-26.758	22.4612	-0.6844	8	
7	MO	3	12	-3.9768	3.9403	-11.700	3.7462	-3.4962	6	*
9	CA	2	45	-1.7649	4.9399	-11.447	7.9172	-2.3967	35	*
9	CA	3	45	-1.5733	5.1178	-11.604	8.4577	-2.0622	35	*

POLLUTANT =O3

REGION	STATE	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	MD	1	32	0.2948	2.85621	-5.303	5.8930	0.5839	23	
3	MD	2	28	1.1042	2.78436	-4.353	6.5616	2.0985	21	*
3	MD	3	32	0.0794	2.61198	-5.040	5.1989	0.1720	23	
3	PA	1	54	-0.2865	4.07059	-8.265	7.6918	-0.5172	43	
3	PA	2	54	-0.2449	3.60685	-7.314	6.8246	-0.4989	43	
3	PA	3	54	-0.1542	3.50314	-7.020	6.7120	-0.3234	43	
3	VA	2	25	-1.1405	2.47453	-5.991	3.7095	-2.3045	18	*
3	VA	3	46	-0.8996	2.77926	-6.347	4.5478	-2.1952	34	*
4	FL	1	42	-0.2041	4.40943	-8.847	8.4384	-0.3000	23	
4	FL	2	46	-0.6648	3.24843	-7.032	5.7021	-1.3881	25	
4	FL	3	48	0.1148	3.89281	-7.515	7.7447	0.2043	26	
4	KY	1	43	-0.6340	6.89988	-14.158	12.8897	-0.6026	36	
4	KY	2	43	-0.3167	6.41168	-12.884	12.2502	-0.3239	36	
4	KY	3	40	-0.7726	6.05311	-12.637	11.0915	-0.8073	33	
4	NC	1	22	2.5643	5.85606	-8.914	14.0421	2.0539	16	
4	NC	2	22	0.8922	3.11956	-5.222	7.0066	1.3415	16	
4	NC	3	32	0.6460	2.50177	-4.257	5.5495	1.4607	22	
4	TN	1	37	1.5011	6.05736	-10.371	13.3735	1.5074	26	
5	IL	1	47	-3.2752	4.64040	-12.370	5.8200	-4.8387	40	*
5	IL	2	46	-2.3703	3.55425	-9.337	4.5960	-4.5231	39	*
5	IN	1	50	-0.4792	4.68899	-9.670	8.7112	-0.7227	42	
5	IN	2	35	-1.0373	4.29731	-9.460	7.3855	-1.4280	29	
5	IN	3	70	-1.0029	3.41559	-7.697	5.6916	-2.4567	60	*
5	MI	2	19	-0.6915	4.04284	-8.616	7.2324	-0.7456	14	
5	OH	1	9	-3.4765	8.37221	-19.886	12.9331	-1.2457	5	
5	OH	3	8	-2.9905	8.37228	-19.400	13.4192	-1.0103	4	
6	NM	1	22	-3.6740	6.49438	-16.403	9.0550	-2.6534	16	*
6	NM	2	22	-3.0339	4.79126	-12.425	6.3570	-2.9700	16	*
7	IA	1	10	-2.3503	2.33860	-6.934	2.2334	-3.1781	5	*
7	IA	2	10	0.1455	0.79202	-1.407	1.6979	0.5809	5	
7	IA	3	9	-0.0439	1.98881	-3.942	3.8542	-0.0662	4	
7	MO	1	16	2.4925	4.63664	-6.595	11.5803	2.1503	8	
7	MO	2	12	1.3442	4.37335	-7.228	9.9160	1.0648	6	
7	MO	3	12	0.3792	5.29206	-9.993	10.7517	0.2482	6	
9	CA	2	53	-2.4600	2.55369	-7.465	2.5452	-7.0131	45	*

TABLE D-2A. STATES WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS REPORTING ORGANIZATIONS AND QUARTERS BY LEVEL

POLLUTANT =PB

REGION	STATE	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	PA	2	18	-2.1655	3.45735	-8.942	4.61095	-2.6573	12	*
4	AL	1	22	-1.6249	4.90592	-11.240	7.99074	-1.5535	14	
4	AL	2	22	-0.3396	3.14725	-6.508	5.82903	-0.5061	14	
5	IL	1	27	1.3422	2.73210	-4.013	6.69713	2.5528	18	*
5	IL	2	18	0.1341	1.82217	-3.437	3.70553	0.3122	12	
5	IN	1	36	0.7671	3.52449	-6.141	7.67513	1.3059	24	
5	OH	1	40	-0.8287	0.66241	-2.127	0.46960	-7.9125	32	*

POLLUTANT =PM10

REGION	STATE	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
5	IL	2	30	0.5444	3.57315	-6.459	7.54775	0.8345	20	
5	MI	2	18	-1.1476	4.00991	-9.007	6.71180	-1.2142	11	
5	OH	2	19	-4.4042	6.23651	-16.628	7.81938	-3.0782	9	*

POLLUTANT =SO2

REGION	STATE	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	ME	1	18	-1.2483	4.0628	-9.212	6.7148	-1.3036	11	
1	ME	2	13	-0.1394	4.6311	-9.216	8.9376	-0.1085	9	
1	ME	3	26	1.1469	5.4525	-9.540	11.8338	1.0725	18	
3	PA	2	22	-0.7647	4.1837	-8.965	7.4355	-0.8573	15	
3	VA	1	17	-0.2761	6.3183	-12.660	12.1079	-0.1802	11	
3	VA	2	27	0.4502	4.8989	-9.152	10.0520	0.4775	18	
3	VA	3	27	-0.0290	4.3281	-8.512	8.4541	-0.0348	18	
3	WV	2	40	0.1878	4.9580	-9.530	9.9054	0.2395	32	
4	KY	1	41	-0.5853	4.9767	-10.340	9.1690	-0.7531	32	
4	KY	2	34	-2.2988	3.9153	-9.973	5.3751	-3.4236	27	*
4	KY	3	13	-0.3481	2.2730	-4.803	4.1070	-0.5522	8	
4	NC	2	26	-4.0763	5.0558	-13.986	5.8331	-4.1111	18	*
4	TN	1	16	-3.3806	7.7922	-18.653	11.8922	-1.7354	10	
4	TN	2	40	2.7615	5.4730	-7.966	13.4886	3.1911	33	*
5	IN	1	37	1.2715	4.3806	-7.314	9.8574	1.7656	21	
5	IN	2	35	1.5118	4.4953	-7.299	10.3226	1.9896	20	
5	IN	3	28	0.6758	3.3431	-5.877	7.2282	1.0697	16	
5	MI	2	16	2.1173	6.6433	-10.904	15.1382	1.2748	9	
5	MI	3	17	1.0695	6.0160	-10.722	12.8608	0.7330	10	
5	OH	1	38	-5.8628	6.8600	-19.308	7.5827	-5.2684	20	*
5	OH	2	44	-4.2837	5.5926	-15.245	6.6779	-5.0808	24	*
5	OH	3	43	-3.9532	5.8765	-15.471	7.5647	-4.4113	24	*
6	TX	1	26	-1.6154	8.5020	-18.279	15.0485	-0.9688	20	
6	TX	2	17	-2.7383	6.6056	-15.685	10.2087	-1.7092	13	
7	MO	1	26	-4.6739	11.6819	-27.570	18.2225	-2.0401	13	
7	MO	2	21	-2.4339	6.0297	-14.252	9.3844	-1.8498	11	
7	MO	3	25	-1.2013	5.7933	-12.556	10.1536	-1.0368	13	
9	CA	1	34	1.9785	4.0937	-6.045	10.0021	2.8182	25	*
9	CA	3	27	3.4874	4.9263	-6.168	13.1430	3.6784	20	*

TABLE D-2A. STATES WITH HOMOGENOUS VARIANCE AND EQUAL MEANS ACROSS REPORTING ORGANIZATIONS AND QUARTERS BY LEVEL 4

POLLUTANT =TSP

REGION	STATE	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	MD	2	28	3.3490	3.81303	-4.125	10.8225	4.6475	20	*
4	NC	2	19	0.2393	4.31651	-8.221	8.6997	0.2416	12	
4	TN	2	50	-0.3742	1.99671	-4.288	3.5393	-1.3252	43	
7	MO	2	47	-0.8632	2.52867	-5.819	4.0930	-2.3402	28	*
7	NE	2	23	0.3884	2.80126	-5.102	5.8789	0.6649	17	
9	CA	2	13	-1.3111	5.30351	-11.706	9.0837	-0.8914	9	

TABLE D-2B. STATES WITH HOMOGENEOUS VARIANCE ACROSS REPORTING ORGANIZATIONS, QUARTERS, AND LEVELS

TABLE D-2B. STATES WITH HOMOGENOUS VARIANCE ACROSS REPORTING ORGANIZATIONS,QUARTERS,AND LEVELS

POLLUTANT =CO

REGION	STATE	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	WV	45	-3.8984	0.96102	8.03043	-19.638	11.8412	-3.2565	24	*
4	NC	60	-0.0907	0.99909	2.13061	-4.267	4.0853	-0.3298	44	
5	IL	36	0.9408	1.00941	2.76518	-4.479	6.3606	2.0414	22	
5	MI	43	-1.9452	0.98055	5.48039	-12.687	8.7963	-2.3275	21	*
5	OH	49	-0.6550	0.99345	6.12692	-12.664	11.3538	-0.7483	25	
6	NM	37	-0.6763	0.99324	5.76648	-11.979	10.6260	-0.7134	27	
6	OK	22	-0.8153	0.99185	3.93717	-8.532	6.9015	-0.9713	10	
6	TX	36	2.1258	1.02126	5.69915	-9.045	13.2961	2.2380	26	*
7	IA	39	-1.4136	0.98586	4.31269	-9.866	7.0393	-2.0469	21	
7	MO	32	3.2075	1.03208	2.73175	-2.147	8.5618	6.6421	16	*

POLLUTANT =NO2

REGION	STATE	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	PA	53	2.1666	1.02167	5.1781	-7.982	12.3157	3.0461	35	*
3	WV	35	3.1064	1.03106	3.6509	-4.049	10.2623	5.0337	19	*
4	FL	20	1.3648	1.01365	10.8149	-19.832	22.5620	0.5644	10	
5	IL	28	-0.7380	0.99262	4.2767	-9.120	7.6443	-0.9131	16	
5	OH	24	-2.5833	0.97417	11.0648	-24.270	19.1037	-1.1438	12	
7	MO	28	-2.9319	0.97068	9.8356	-22.210	16.3459	-1.5773	14	
9	CA	90	-1.6691	0.98331	5.0296	-11.527	8.1890	-3.1482	70	*

POLLUTANT =O3

REGION	STATE	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	MD	92	0.4662	1.00466	2.75181	-4.927	5.8598	1.6251	67	
3	PA	162	-0.2285	0.99771	3.73502	-7.549	7.0921	-0.7787	129	
3	VA	71	-0.9844	0.99016	2.67770	-6.233	4.2639	-3.0977	52	*
4	KY	126	-0.5697	0.99430	6.47557	-13.262	12.1224	-0.9876	105	
5	OH	17	-3.2478	0.96752	6.37224	-19.657	13.1618	-1.5994	9	
7	IA	29	-0.7739	0.99226	1.81862	-4.338	2.7906	-2.2916	14	*
7	MO	40	1.5140	1.01514	4.76854	-7.832	10.8604	2.0081	20	

POLLUTANT =PB

REGION	STATE	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
4	AL	44	-0.98222	0.99018	4.12148	-9.0603	7.09588	-1.5808	28	
5	IL	45	0.85896	1.00859	2.40972	-3.8641	5.58201	2.3912	30	*

TABLE D-2B. STATES WITH HOMOGENOUS VARIANCE ACROSS REPORTING ORGANIZATIONS,QUARTERS,AND LEVELS

POLLUTANT =SO2

REGION	STATE	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
1	ME	57	0.0971	1.00097	4.89291	-9.493	9.6872	0.1499	38	
3	VA	71	0.0941	1.00094	5.07037	-9.844	10.0320	0.1563	47	
4	TN	56	1.0066	1.01007	6.09170	-10.933	12.9463	1.2365	43	
5	IN	100	1.1888	1.01189	4.15901	-6.963	9.3405	2.8584	57	*
5	MI	33	1.5775	1.01577	6.32091	-10.811	13.9665	1.4337	19	
5	OH	125	-4.6501	0.95350	6.08836	-16.583	7.2831	-8.5391	68	*
6	TX	43	-2.0594	0.97941	7.81012	-17.367	13.2485	-1.7291	33	
7	MO	72	-2.8148	0.97185	8.39933	-19.277	13.6479	-2.8436	37	*
9	CA	61	2.6464	1.02646	4.48287	-6.140	11.4328	4.6107	45	*

TABLE D-3A. REGIONS WITH HOMOGENEOUS VARIANCE AND EQUAL MEANS ACROSS STATES AND QUARTERS BY LEVEL

TABLE D-3A. REGIONS WITH HOMOGENOUS VARIANCE ACROSS STATES AND QUARTERS BY LEVEL

POLLUTANT =CO

REGION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	2	29	-3.3368	4.14872	-11.468	4.7947	-4.3312	15	*
4	2	88	0.0627	2.22003	-4.289	4.4140	0.2649	60	
4	3	111	0.2357	2.00599	-3.696	4.1674	1.2377	80	
5	1	69	-1.5349	6.68636	-14.640	11.5703	-1.9069	39	
5	2	40	0.4123	3.79070	-7.018	7.8420	0.6878	22	
6	1	33	1.7332	6.25981	-10.536	14.0025	1.5906	21	
7	2	20	0.3158	3.43398	-6.415	7.0464	0.4113	10	

POLLUTANT =NO2

REGION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	2	45	3.0343	4.95039	-6.668	12.7370	4.11171	26	*
3	3	53	1.7731	4.27892	-6.614	10.1598	3.01676	32	*
5	2	22	-1.2666	6.29278	-13.600	11.0673	-0.94407	12	
5	3	22	-1.3147	6.40197	-13.863	11.2332	-0.96320	12	

POLLUTANT =O3

REGION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	1	86	-0.0702	3.69301	-7.309	7.16809	-0.1763	66	
3	3	132	-0.3573	3.07772	-6.390	5.67503	-1.3338	100	
5	1	106	-1.9734	4.95409	-11.683	7.73660	-4.1012	87	*
5	2	100	-1.5848	3.91532	-9.259	6.08924	-4.0477	82	*
5	3	78	-1.2068	3.91382	-8.878	6.46431	-2.7232	64	*
7	2	22	0.7994	3.27377	-5.617	7.21596	1.1453	11	
7	3	21	0.1979	4.28785	-8.206	8.60209	0.2115	10	

POLLUTANT =PM10

REGION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
5	2	67	-1.3135	4.4223	-9.9812	7.35419	-2.4312	40	*

POLLUTANT =SO2

REGION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	2	89	0.032	4.77358	-9.324	9.38816	0.0631	65	
4	1	57	-1.370	5.77297	-12.685	9.94506	-1.7916	42	

TABLE D-3A. REGIONS WITH HOMOGENOUS VARIANCE ACROSS STATES AND QUARTERS BY LEVEL

POLLUTANT =TSP

REGION	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
7	2	70	-0.45193	2.63497	-5.6165	4.7126	-1.435	45	

TABLE D-3B. REGIONS WITH HOMOGENEOUS VARIANCE ACROSS STATES, QUARTERS, AND LEVELS

TABLE D-3B. REGIONS WITH HOMOGENOUS VARIANCE ACROSS STATES,QUARTERS,AND LEVELS

POLLUTANT =CO

REGION	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
4	199	0.15917	1.00159	2.10040	-3.958	4.2759	1.0690	140	
5	109	-0.82036	0.99180	5.81084	-12.210	10.5689	-1.4739	61	

POLLUTANT =NO2

REGION	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	98	2.3522	1.02352	4.59208	-6.648	11.3527	5.0709	58	*
5	44	-1.2906	0.98709	6.34761	-13.732	11.1507	-1.3487	24	

POLLUTANT =O3

REGION	N	AVERAGE % BIAS	SLOPE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	D.F.	SIGNIFICANT BIAS
3	218	-0.24405	0.99756	3.33597	-6.7826	6.29446	-1.0801	166	
7	43	0.50562	1.00506	3.79066	-6.9241	7.93531	0.8747	21	

TABLE D-4. PROBABILITY LIMITS AND SLOPES FOR INDIVIDUAL SITES WITH HOMOGENEOUS VARIANCE ACROSS LEVELS

TABLE D-4. PROBABILITY LIMITS AND SLOPES FOR INDIVIDUAL SITES WITH HOMOGENOUS VARIANCE ACROSS LEVELS 1

POLLUTANT =CO

REGION	STATE	REP_ORG	SITE	N	AVERAGE % BIAS	SLOPE	STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	TDF	SIGNIFICANT BIAS
1	ME	1	230050018	12	-3.8849	0.96115	4.4734	-12.653	4.8830	-3.0084	9	*
1	MA	1	250130014	10	-0.3201	0.99680	1.8927	-4.030	3.3895	-0.5349	7	
1	MA	1	250250002	6	3.2847	1.03285	7.8336	-12.069	18.6386	1.0271	3	
1	MA	1	250250021	7	1.5222	1.01522	4.3558	-7.015	10.0595	0.9246	4	
1	MA	1	250270020	10	1.8696	1.01870	1.7191	-1.500	5.2390	3.4392	7	*
1	NH	1	330110017	6	-4.8579	0.95142	1.5345	-7.866	-1.8502	-7.7545	3	*
1	NH	1	330111009	6	-3.3171	0.96683	1.4973	-6.252	-0.3823	-5.4264	3	*
1	RI	1	440070015	14	3.3239	1.03324	1.4783	0.426	6.2215	8.4127	12	*
1	RI	1	440071009	12	1.7207	1.01721	2.1508	-2.495	5.9362	2.7714	10	*
2	NJ	1	340051001	6	-0.3597	0.99640	7.6408	-15.336	14.6163	-0.1153	3	
2	NJ	1	340071001	6	-3.7978	0.96202	4.4266	-12.474	4.8783	-2.1015	3	
2	NY	1	360290005	12	1.5750	1.01575	4.6351	-7.510	10.6598	1.1771	9	
2	NY	1	360290016	6	0.8425	1.00843	2.3436	-3.751	5.4359	0.8806	3	
2	NY	1	360470071	12	-1.4347	0.98565	2.3005	-5.944	3.0742	-2.1605	9	
2	NY	1	360470076	9	-0.2611	0.99739	3.3804	-6.887	6.3646	-0.2317	6	
2	NY	1	360551004	12	-1.4556	0.98544	1.4214	-4.241	1.3303	-3.5475	9	*
2	NY	1	360556001	9	-2.2519	0.97748	1.6492	-5.484	0.9807	-4.0962	6	*
2	NY	1	360590005	27	0.9212	1.00921	1.9215	-2.845	4.6873	2.4912	24	*
2	NY	1	360610058	18	0.0317	1.00032	2.5691	-5.004	5.0672	0.0524	15	
2	NY	1	360610062	6	-0.4844	0.99516	1.1494	-2.737	1.7683	-1.0324	3	
2	NY	1	360610075	6	0.6888	1.00689	1.5308	-2.312	3.6892	1.1021	3	
2	NY	1	360610082	12	2.1175	1.02117	2.9051	-3.577	7.8115	2.5249	9	*
2	NY	1	360632006	9	-1.3587	0.98641	4.9152	-10.992	8.2750	-0.8293	6	
2	NY	1	360670017	9	0.9037	1.00904	1.9028	-2.826	4.6332	1.4248	6	
2	NY	1	360930003	12	2.0661	1.02066	2.3884	-2.615	6.7474	2.9966	9	*
3	DE	1	100032002	13	0.2170	1.00217	2.2055	-4.106	4.5398	0.3547	10	
3	DE	1	100033001	12	-1.1045	0.98896	2.3137	-5.639	3.4304	-1.6536	9	
3	DC	1	110010023	6	-0.0908	0.99909	4.4233	-8.761	8.5789	-0.0503	3	
3	MD	1	240330001	6	-1.1182	0.98882	3.6155	-8.205	5.9681	-0.7576	3	
3	MD	1	245100018	8	-0.7791	0.99221	1.5279	-3.774	2.2155	-1.4423	5	
3	MD	1	245100034	6	-1.6293	0.98371	0.8196	-3.236	-0.0228	-4.8691	3	*
3	MD	5	240053001	10	-0.1569	0.99843	0.6439	-1.419	1.1051	-0.7706	7	
3	PA	1	420430401	9	-2.4065	0.97594	4.0599	-10.364	5.5510	-1.7782	6	
3	PA	1	420490010	6	-1.9223	0.98078	1.4216	-4.709	0.8640	-3.3123	3	*
3	PA	2	420030026	9	0.5964	1.00596	1.5866	-2.513	3.7062	1.1277	6	
3	PA	2	420030038	12	0.6019	1.00602	0.7726	-0.912	2.1163	2.6988	9	*
3	PA	3	421010029	6	4.3357	1.04336	1.4428	1.508	7.1635	7.3610	3	*
3	PA	3	421010047	6	1.9536	1.01954	3.3963	-4.703	8.6103	1.4089	3	
3	VA	3	510591004	7	-0.7585	0.99241	1.4902	-3.679	2.1623	-1.3467	4	
3	VA	3	510595001	6	3.6261	1.03626	4.8191	-5.819	13.0715	1.8431	3	
3	VA	3	516000005	8	-1.4342	0.98566	1.3147	-4.011	1.1426	-3.0856	5	*
3	WV	1	540250001	7	-3.9678	0.96032	11.2703	-26.058	18.1220	-0.9315	4	
3	WV	1	540390004	14	-1.1065	0.98894	9.1509	-19.042	16.8294	-0.4524	11	
3	WV	2	540690007	12	-4.5928	0.95407	5.2770	-14.936	5.7502	-3.0149	9	*
3	WV	2	540690008	12	-6.4209	0.93579	4.7548	-15.740	2.8985	-4.6780	9	*
4	AL	12	10730025	12	-0.4024	0.99598	1.7955	-3.922	3.1169	-0.7763	9	
4	AL	12	10730028	12	-0.5743	0.99426	2.5684	-5.608	4.4597	-0.7746	9	
4	AL	12	10730032	6	0.6278	1.00628	5.4551	-10.064	11.3198	0.2819	3	
4	AL	12	10730033	9	5.1536	1.05154	6.2102	-7.018	17.3256	2.4896	6	*
4	AL	12	10731003	12	1.5468	1.01547	3.3434	-5.006	8.1000	1.6026	9	
4	FL	11	120310080	9	2.2282	1.02228	2.9422	-3.538	7.9950	2.2720	6	
4	FL	11	120310082	6	-0.7402	0.99260	3.7034	-7.999	6.5184	-0.4896	3	
4	FL	11	120310084	6	0.8383	1.00838	4.1056	-7.209	8.8854	0.5002	3	

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TABLE D-4. PROBABILITY LIMITS AND SLOPES FOR INDIVIDUAL SITES WITH HOMOGENOUS VARIANCE ACROSS LEVELS 2

POLLUTANT =CO

REGION	STATE	REP_ORG	SITE	N	AVERAGE % BIAS	SLOPE	STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	TDF	SIGNIFICANT BIAS
4	FL	13	121030018	15	1.4493	1.01449	1.9794	-2.430	5.3290	2.836	12	*
4	FL	13	121030024	12	2.6779	1.02678	3.2574	-3.707	9.0623	2.848	9	*
4	FL	13	121031005	15	1.0399	1.01040	3.2542	-5.338	7.4181	1.238	12	
4	FL	16	120991004	14	1.1000	1.01100	2.7429	-4.276	6.4760	1.501	11	
4	FL	17	120110008	8	-0.2673	0.99733	2.0409	-4.267	3.7327	-0.371	5	
4	FL	17	120111003	7	-5.0820	0.94918	2.4987	-9.979	-0.1846	-5.381	4	*
4	FL	17	120112004	6	1.9268	1.01927	3.8959	-5.709	9.5627	1.211	3	
4	FL	18	120254002	8	-1.8381	0.98162	1.8161	-5.398	1.7215	-2.863	5	*
4	KY	1	210190014	9	3.2010	1.03201	3.0718	-2.820	9.2216	3.126	6	*
4	KY	1	210590012	11	1.3450	1.01345	2.4900	-3.535	6.2253	1.791	8	
4	KY	1	210670009	10	1.6236	1.01624	3.1466	-4.544	7.7909	1.632	7	
4	KY	1	211170009	10	0.8633	1.00863	3.1933	-5.396	7.1221	0.855	7	
4	KY	1	211451023	8	1.9521	1.01952	3.5633	-5.032	8.9361	1.550	5	
4	KY	2	211110045	8	-0.6677	0.99332	2.0207	-4.628	3.2929	-0.935	5	
4	KY	2	211110046	8	-0.7341	0.99266	3.2736	-7.150	5.6822	-0.634	5	
4	KY	2	211111019	10	-1.1978	0.98802	3.0171	-7.111	4.7157	-1.255	7	
4	MS	100	280490016	12	-4.4986	0.95501	2.3388	-9.083	0.0855	-6.663	9	*
4	NC	1	370630008	6	-1.6162	0.98384	7.6672	-16.644	13.4115	-0.516	3	
4	NC	2	370670018	12	-0.2205	0.99779	4.1924	-8.438	7.9967	-0.182	9	
4	NC	2	370670019	12	2.7202	1.02720	3.2738	-3.696	9.1368	2.878	9	*
4	NC	3	371190029	18	-2.1917	0.97808	1.6566	-5.439	1.0553	-5.613	15	*
4	NC	3	371190031	12	-0.6815	0.99319	3.2392	-7.030	5.6673	-0.729	9	
4	NC	3	371190032	18	-0.6583	0.99342	4.1723	-8.836	7.5193	-0.669	15	
4	NC	3	371190035	15	-1.1300	0.98870	2.7413	-6.503	4.2429	-1.597	12	
4	TN	2	471570021	18	-0.0574	0.99943	1.2156	-2.440	2.3253	-0.200	15	
4	TN	2	471570024	12	-0.5248	0.99475	1.7617	-3.978	2.9282	-1.032	9	
4	TN	2	471570034	15	0.0038	1.00004	1.7756	-3.476	3.4840	0.008	12	
4	TN	2	471570035	15	-0.1666	0.99833	2.3950	-4.861	4.5275	-0.269	12	
4	TN	2	471570036	12	-1.3928	0.98607	2.1676	-5.641	2.8557	-2.226	9	
4	TN	3	470370021	15	0.3644	1.00364	1.8543	-3.270	3.9987	0.761	12	
4	TN	3	470370028	15	0.0299	1.00030	2.6227	-5.111	5.1704	0.044	12	
4	TN	3	470370031	15	2.1138	1.02114	1.7764	-1.368	5.5955	4.609	12	*
5	IL	3	170310037	12	-2.4848	0.97515	3.5546	-9.452	4.4822	-2.422	9	*
5	IL	3	170311002	12	0.0332	1.00033	3.2086	-6.256	6.3221	0.036	9	
5	IL	3	170314002	9	-1.9021	0.98098	6.0356	-13.732	9.9276	-0.945	6	
5	IN	1	180970070	11	1.0113	1.01011	4.6816	-8.165	10.1873	0.716	8	
5	IN	1	181411008	6	-0.0091	0.99991	4.9968	-9.803	9.7847	-0.004	3	
5	IN	1	181571001	9	5.5909	1.05591	5.6286	-5.441	16.6231	2.980	6	*
5	IN	2	181630012	23	-3.2440	0.96756	6.5219	-16.027	9.5389	-2.385	20	*
5	IN	8	180970034	12	0.8554	1.00855	1.3984	-1.886	3.5963	2.119	9	
5	IN	8	180970061	12	1.2583	1.01258	1.8939	-2.454	4.9704	2.302	9	*
5	IN	8	180970068	12	0.3482	1.00348	1.6227	-2.832	3.5287	0.743	9	
5	IN	100	180890015	24	4.7661	1.04766	4.9905	-5.015	14.5475	4.679	21	*
5	IN	100	180891016	21	1.5977	1.01598	4.4874	-7.198	10.3930	1.632	18	
5	MI	1	260810020	6	1.4149	1.01415	1.9762	-2.458	5.2882	1.754	3	
5	MI	1	261450002	9	0.5030	1.00503	2.9011	-5.183	6.1892	0.520	6	
5	MI	2	261630016	6	-6.3992	0.93601	13.4824	-32.825	20.0264	-1.163	3	
5	MN	1	271230044	6	-1.3583	0.98642	0.5909	-2.516	-0.2001	-5.631	3	*
5	MN	1	271230050	9	-1.1935	0.98802	1.0717	-3.299	0.9020	-3.355	6	*
5	MN	1	271230051	6	-5.5824	0.94418	0.7893	-7.129	-4.0353	-17.324	3	*
5	MN	1	271410025	6	-1.0464	0.98954	5.2024	-11.243	9.1503	-0.493	3	
5	OH	1	390490004	8	6.9610	1.06961	8.8401	-10.366	24.2876	2.227	5	
5	OH	6	391530020	6	-5.5797	0.94420	7.6749	-20.623	9.4630	-1.781	3	

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TABLE D-4. PROBABILITY LIMITS AND SLOPES FOR INDIVIDUAL SITES WITH HOMOGENOUS VARIANCE ACROSS LEVELS

POLLUTANT =CO

REGION	STATE	REP_ORG	SITE	N	AVERAGE % BIAS	SLOPE	STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	TDF	SIGNIFICANT BIAS
5	OH	7	391511001	9	-4.3117	0.95688	5.1758	-14.456	5.8328	-2.499	6	*
5	OH	9	390350048	6	-4.6284	0.95372	2.7094	-9.939	0.6820	-4.184	3	*
5	OH	12	390851004	12	3.3486	1.03349	6.1525	-8.710	15.4074	1.885	9	
5	OH	14	390811012	9	-1.5953	0.98405	2.3241	-6.150	2.9599	-2.059	6	
5	OH	15	390950032	6	-5.8047	0.94195	1.7648	-9.264	-2.3456	-8.057	4	*
5	OH	16	390993001	6	0.3847	1.00385	3.0134	-5.521	6.2909	0.313	3	
5	WI	1	550790047	6	1.9682	1.01968	5.9354	-9.665	13.6016	0.812	3	
5	WI	1	550790048	6	0.8512	1.00851	0.7131	-0.546	2.2488	2.924	3	
5	WI	1	551010017	6	4.2782	1.04278	2.9870	-1.576	10.1326	3.508	3	*
6	LA	1	220330004	11	-1.2236	0.98776	2.8876	-6.883	4.4361	-1.405	8	
6	LA	1	220710012	12	3.5338	1.03534	4.9280	-6.125	13.1926	2.484	9	*
6	LA	1	220710017	12	-2.0862	0.97914	1.3575	-4.747	0.5745	-5.324	9	*
6	NM	1	350130011	8	-1.2835	0.98716	4.2359	-9.586	7.0189	-0.857	5	
6	NM	1	350131012	8	-3.9702	0.96030	11.2380	-25.997	18.0562	-0.999	5	
6	NM	1	350490019	8	2.3325	1.02333	9.8146	-16.904	21.5691	0.672	5	
6	NM	2	350010019	8	-4.3969	0.95603	1.1757	-6.701	-2.0926	-10.578	5	*
6	NM	2	350010022	8	-3.1274	0.96873	3.5740	-10.132	3.8776	-2.475	5	
6	NM	2	350010023	8	1.6510	1.01651	14.9937	-27.737	31.0386	0.311	5	
6	OK	101	400270044	8	0.3278	1.00328	3.8521	-7.222	7.8778	0.241	5	
6	OK	102	401090018	8	4.4882	1.04488	3.8122	-2.984	11.9601	3.330	5	*
6	OK	103	401430126	9	-1.1309	0.98869	2.0076	-5.066	2.8041	-1.690	6	
6	OK	103	401430191	8	1.6124	1.01612	4.6535	-7.508	10.7332	0.980	5	
6	TX	2	481130053	9	6.2721	1.06272	7.5315	-8.490	21.0338	2.498	6	*
6	TX	2	481130055	8	-0.8202	0.99180	2.6421	-5.999	4.3582	-0.878	6	
6	TX	2	481130069	6	3.4891	1.03489	2.7744	-1.949	8.9270	3.080	3	
6	TX	3	481410002	6	-4.2649	0.95735	4.6002	-13.281	4.7514	-2.271	3	
6	TX	6	482010047	6	0.8496	1.00850	1.1951	-1.493	3.1921	1.741	3	
7	IA	1	191530052	8	-0.1676	0.99832	5.1278	-10.218	9.8830	-0.092	5	
7	IA	1	191530060	7	1.1242	1.01124	6.0356	-10.706	12.9539	0.493	4	
7	KS	1	201731003	6	2.4418	1.02442	6.5237	-10.345	15.2282	0.917	3	
7	MO	1	290950009	8	-1.0797	0.98920	2.2135	-5.418	3.2588	-1.380	5	
7	MO	2	291890001	6	3.2688	1.03269	6.0040	-8.499	15.0366	1.334	3	
7	MO	2	291893001	6	-2.2613	0.97739	5.0932	-12.244	7.7213	-1.088	3	
7	MO	2	291895001	6	-0.8220	0.99178	3.4559	-7.595	5.9515	-0.583	3	
7	MO	3	295100080	6	6.2239	1.06224	4.4960	-2.588	15.0360	3.391	3	*
7	MO	4	290470009	8	7.1652	1.07165	6.3249	-5.232	19.5621	3.204	5	*
7	MO	5	290770032	12	4.0983	1.04098	2.6667	-1.128	9.3250	5.324	9	*
7	NE	2	311090018	11	-0.2597	0.99740	6.1658	-12.345	11.8253	-0.140	8	
8	CO	1	80050002	6	8.6375	1.08637	3.0039	2.750	14.5251	7.043	3	*
8	CO	1	80051002	6	5.0301	1.05030	2.8410	-0.538	10.5984	4.337	3	*
8	CO	1	80131001	6	3.6039	1.03604	2.4772	-1.251	8.4592	3.564	3	*
8	CO	1	80310002	8	1.8639	1.01864	4.7109	-7.370	11.0973	1.119	4	
8	CO	1	80310013	8	8.0847	1.08085	10.5421	-12.578	28.7473	2.169	4	
8	CO	1	80310014	9	-1.1779	0.98822	18.5725	-37.580	35.2243	-0.190	6	
8	CO	1	80410004	8	-1.0948	0.98905	5.8464	-12.554	10.3641	-0.530	4	
8	CO	1	80410006	6	12.9647	1.12965	3.4256	6.250	19.6790	9.270	3	*
8	CO	1	80590002	6	11.7429	1.11743	15.8722	-19.367	42.8524	1.812	3	
8	CO	1	80691004	6	4.2600	1.04260	2.3420	-0.330	8.8503	4.455	3	*
8	CO	1	81230007	9	7.3219	1.07322	4.7965	-2.079	16.7230	4.580	6	*
8	MT	1	300131023	12	5.5968	1.05597	7.1469	-8.411	19.6047	2.713	9	*
8	MT	3	300131023	6	3.7857	1.03786	9.1745	-14.196	21.7678	1.011	3	
8	UT	1	490350003	9	2.5009	1.02501	2.5906	-2.577	7.5785	2.896	6	*
8	UT	1	490350011	9	1.1887	1.01189	4.6744	-7.973	10.3506	0.763	6	

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TABLE D-4. PROBABILITY LIMITS AND SLOPES FOR INDIVIDUAL SITES WITH HOMOGENOUS VARIANCE ACROSS LEVELS

POLLUTANT =CO

REGION	STATE	REP_ORG	SITE	N	AVERAGE % BIAS	SLOPE	STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT	STUDENT"S T	TDF	SIGNIFICANT BIAS
8	UT	1	490490002	9	0.8288	1.00829	3.24586	-5.533	7.1906	0.766	6	
8	UT	1	490490004	9	1.2865	1.01287	2.46310	-3.541	6.1142	1.567	6	
8	UT	1	490570005	6	-0.9591	0.99041	1.08134	-3.079	1.1603	-2.173	3	
9	AZ	300	40190002	7	-0.3884	0.99612	0.66136	-1.685	0.9079	-1.554	5	
9	CA	4	60010003	6	-0.2837	0.99716	1.65397	-3.525	2.9581	-0.420	3	
9	CA	4	60010005	6	0.2723	1.00272	2.19959	-4.039	4.5835	0.303	3	
9	CA	4	60011001	6	-0.2519	0.99748	2.92809	-5.991	5.4872	-0.211	3	
9	CA	4	60130002	6	0.3982	1.00398	1.27422	-2.099	2.8957	0.766	3	
9	CA	4	60130003	6	-1.5631	0.98437	2.29811	-6.067	2.9412	-1.666	3	
9	CA	4	60131002	6	2.3901	1.02390	1.72034	-0.982	5.7620	3.403	3	*
9	CA	4	60133001	6	0.6090	1.00609	1.41786	-2.170	3.3880	1.052	3	
9	CA	4	60410001	6	3.0103	1.03010	4.62758	-6.060	12.0803	1.593	3	
9	CA	4	60550003	6	3.0317	1.03032	1.22301	0.635	5.4288	6.072	3	*
9	CA	4	60750005	6	0.5578	1.00558	3.55896	-6.418	7.5333	0.384	3	
9	CA	4	60811001	6	0.9335	1.00934	2.98070	-4.909	6.7757	0.767	3	
9	CA	4	60850002	6	1.3736	1.01374	0.97137	-0.530	3.2774	3.464	3	*
9	CA	4	60950004	6	-1.2590	0.98741	1.90510	-4.993	2.4750	-1.619	3	
10	ID	1	160010011	7	-0.9686	0.99031	0.59360	-2.132	0.1949	-4.317	5	*
10	OR	1	410290009	20	1.4762	1.01476	4.87105	-8.071	11.0235	1.355	17	
10	OR	1	410330006	20	-0.0822	0.99918	4.07845	-8.076	7.9115	-0.090	17	
10	OR	1	410390013	20	2.2750	1.02275	4.62965	-6.799	11.3491	2.198	17	*
10	OR	1	410470018	12	-1.5369	0.98463	0.95872	-3.416	0.3422	-5.553	10	*
10	OR	1	410510075	22	-4.2224	0.95778	7.53210	-18.985	10.5405	-2.629	19	*
10	OR	1	410510078	14	-0.0711	0.99929	1.78413	-3.568	3.4258	-0.149	12	
10	WA	1	530110010	6	-1.1874	0.98813	2.74343	-6.565	4.1897	-1.060	3	
10	WA	1	530330074	6	-0.4200	0.99580	1.38509	-3.135	2.2948	-0.743	3	
10	WA	1	530330075	6	0.3333	1.00333	0.70875	-1.056	1.7225	1.152	3	
10	WA	1	530330077	6	-0.9410	0.99059	3.25806	-7.327	5.4448	-0.707	3	
10	WA	1	530330083	6	1.0686	1.01069	3.38299	-5.562	7.6993	0.774	3	
10	WA	1	530330084	6	-0.3814	0.99619	1.89435	-4.094	3.3315	-0.493	3	
10	WA	1	530331003	6	-0.7155	0.99284	2.40433	-5.428	3.9970	-0.729	3	
10	WA	1	530630027	9	2.7828	1.02783	1.95887	-1.057	6.6222	4.262	6	*
10	WA	1	530630029	9	4.9106	1.04911	7.07851	-8.963	18.7845	2.081	6	
10	WA	1	530630032	9	6.8231	1.06823	1.32426	4.228	9.4186	15.457	6	*
10	WA	1	530630040	9	0.3115	1.00312	2.99674	-5.562	6.1851	0.312	6	
10	WA	1	530770006	6	-0.6271	0.99373	0.10774	-0.838	-0.4160	-14.258	3	*
10	WA	1	530770010	6	-0.6939	0.99306	1.26597	-3.175	1.7874	-1.343	3	

APPENDIX E

PROBABILITY LIMITS FOR METHODS

TABLE E-1A. NATIONAL PROBABILITY LIMITS FOR 1987
PARS PRECISION DATA BY METHOD

TABLE 1. NATIONAL SUMMARY BY METHOD FOR 1987 PARS PRECISION DATA

POLLUTANT =CO

METHOD	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
8	4026	0.4017	3.90169	-7.246	8.04902
12	3339	-0.5599	3.67822	-7.769	6.64942
18	410	-1.7016	4.74104	-10.994	7.59085
33	112	-1.0011	2.40848	-5.722	3.71950
41	688	1.6216	3.82089	-5.867	9.11059
48	25	4.6440	2.55017	-0.354	9.64237
51	3006	0.6455	3.19147	-5.610	6.90078
54	1741	-0.4827	2.52867	-5.439	4.47348

POLLUTANT =NO2

METHOD	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
21	218	-1.3756	6.2365	-13.599	10.8478
22	1319	0.4753	5.3914	-10.092	11.0424
25	1331	-0.1810	4.6744	-9.343	8.9809
31	10	5.7201	18.2194	-29.990	41.4302
35	3232	-0.7040	5.0076	-10.519	9.1108
42	300	0.3527	6.4015	-12.194	12.8997

POLLUTANT =O3

METHOD	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
3	39	-2.8652	4.44597	-11.579	5.84886
4	475	-0.4869	4.50934	-9.325	8.35139
7	935	-0.3638	4.76066	-9.695	8.96714
14	87	0.0491	4.05302	-7.895	7.99306
15	40	-0.5702	4.99281	-10.356	9.21575
17	669	-1.1594	4.64694	-10.267	7.94863
19	11762	-0.7652	4.92189	-10.412	8.88165
20	24	-1.5076	3.07337	-7.531	4.51622
47	1951	-0.1830	3.27835	-6.609	6.24253
53	487	-2.4628	3.40930	-9.145	4.21947
56	549	-0.2305	3.71777	-7.517	7.05633

POLLUTANT =PB

METHOD	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
43	251	-0.0241	7.0890	-13.919	13.8703
45	3	4.8780	0.0000	4.878	4.8780
57	129	-2.4891	13.2969	-28.551	23.5727
58	48	-0.1100	16.6938	-32.830	32.6098
59	22	-2.2883	5.7903	-13.637	9.0606
803	794	-2.1017	10.9352	-23.535	19.3314

TABLE 1. NATIONAL SUMMARY BY METHOD FOR 1987 PARS PRECISION DATA

POLLUTANT =PM10

METHOD	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
64	29	-0.5638	2.5154	-5.494	4.3664
65	11	-2.0221	8.8516	-19.371	15.3271
702	13	-2.3220	12.2177	-26.269	21.6247
771	1791	1.3466	6.8533	-12.086	14.7791
773	15	3.3221	4.9611	-6.402	13.0459
774	77	1.2170	6.6371	-11.792	14.2258

POLLUTANT =SO2

METHOD	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
5	1	0.9804	.	.	.
6	20	8.0826	3.93287	0.374	15.7910
9	13560	-1.7220	4.46998	-10.483	7.0392
10	85	1.5624	3.73543	-5.759	8.8839
11	5685	1.1439	3.79780	-6.300	8.5875
13	164	0.4705	5.29387	-9.905	10.8465
29	658	-3.0108	5.59775	-13.982	7.9608
39	4128	-0.6681	4.19009	-8.881	7.5444
46	230	-1.6490	4.66970	-10.802	7.5037
60	344	-0.4874	4.52110	-9.349	8.3740
61	33	-0.5820	2.42286	-5.331	4.1668

POLLUTANT =TSP

METHOD	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
802	14909	0.0768653	5.26593	-10.244	10.3981

TABLE E-1B. NATIONAL PROBABILITY LIMITS FOR 1987
PARS ACCURACY DATA BY METHOD

TABLE 2. NATIONAL SUMMARY BY METHOD FOR 1987 PARS ACCURACY DATA

POLLUTANT =CO

METHOD	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
8	1	231	1.9091	7.3385	-12.474	16.2927
8	2	165	0.5253	2.5949	-4.561	5.6114
8	3	159	-0.1997	2.0619	-4.241	3.8417
12	1	305	-0.2185	6.4870	-12.933	12.4960
12	2	282	0.5269	3.9952	-7.304	8.3576
12	3	288	-0.1594	4.1340	-8.262	7.9431
12	4	6	0.0049	2.0094	-3.933	3.9432
18	1	36	-6.2502	10.4680	-26.767	14.2672
18	2	23	-0.1344	1.2872	-2.657	2.3885
18	3	23	-0.3438	1.4833	-3.251	2.5634
33	1	6	0.1040	7.3076	-14.219	14.4269
33	2	6	-0.5132	1.6064	-3.662	2.6354
33	3	6	-2.0699	3.9484	-9.809	5.6689
41	1	34	-1.4143	8.3489	-17.778	14.9495
41	2	65	0.8678	4.1711	-7.308	9.0432
41	3	59	-1.5186	3.2069	-7.804	4.7669
48	1	1	2.9963	.	.	.
48	2	1	0.9317	.	.	.
48	3	1	0.0000	.	.	.
51	1	255	0.3623	5.0397	-9.516	10.2401
51	2	231	0.0026	3.0123	-5.902	5.9068
51	3	218	0.2248	2.6182	-4.907	5.3565
54	1	136	-0.4143	3.7069	-7.680	6.8513
54	2	115	0.1888	2.2822	-4.284	4.6619
54	3	123	0.9946	2.3274	-3.567	5.5563

POLLUTANT =NO2

METHOD	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
21	1	14	-4.1845	12.6497	-28.978	20.6088
21	2	14	-4.9127	6.7260	-18.096	8.2703
21	3	14	-5.0253	5.1722	-15.163	5.1122
22	1	123	-0.4607	8.4576	-17.038	16.1163
22	2	103	0.3711	5.5241	-10.456	11.1983
22	3	106	0.0993	5.2930	-10.275	10.4735
25	1	175	2.2835	10.2781	-17.861	22.4285
25	2	154	0.8622	5.0965	-9.127	10.8513
25	3	153	0.1432	3.9574	-7.613	7.8998
35	1	108	1.3096	8.9473	-16.227	18.8463
35	2	97	-0.1055	5.0212	-9.947	9.7360
35	3	91	-0.2266	5.1477	-10.316	9.8628
37	1	1	0.0000	.	.	.
37	2	1	5.0847	.	.	.
37	3	1	2.7431	.	.	.
38	1	2	-4.7253	.	.	.
38	2	2	-1.0187	.	.	.
38	3	2	-0.2079	.	.	.
42	1	17	-4.8023	10.4416	-25.268	15.6632
42	2	16	-3.6081	8.8316	-20.918	13.7018
42	3	13	-2.0668	2.5301	-7.026	2.8921

TABLE 2. NATIONAL SUMMARY BY METHOD FOR 1987 PARS ACCURACY DATA

POLLUTANT =O3

METHOD	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
3	1	2	0.8929	1.2627	-1.582	3.3677
3	2	2	-1.1334	0.0227	-1.178	-1.0889
3	3	2	-1.0185	1.0786	-3.133	1.0957
4	1	32	-0.0406	5.7252	-11.262	11.1808
4	2	26	-2.6003	14.3187	-30.665	25.4643
4	3	33	0.0020	4.0205	-7.878	7.8821
7	1	118	0.3437	5.6904	-10.810	11.4968
7	2	112	-0.4614	7.7388	-15.629	14.7067
7	3	104	-1.5601	5.8049	-12.938	9.8176
14	1	4	1.9990	10.8370	-19.241	23.2395
14	2	4	1.0324	4.3022	-7.400	9.4646
14	3	3	1.1286	2.4305	-3.635	5.8922
14	4	1	2.5926	.	.	.
17	1	140	-1.4561	6.8021	-14.788	11.8760
17	2	124	-0.0151	4.6596	-9.148	9.1177
17	3	122	-0.1614	4.2768	-8.544	8.2212
19	1	686	-1.2641	6.2310	-13.477	10.9487
19	2	627	-0.8278	3.6898	-8.060	6.4041
19	3	635	-0.8854	3.3938	-7.537	5.7664
19	4	81	-2.3790	2.2291	-6.748	1.9901
20	1	10	4.4942	6.9215	-9.072	18.0604
20	2	9	0.1856	2.6627	-5.033	5.4045
20	3	9	-0.2859	2.1118	-4.425	3.8533
47	1	242	0.0359	5.6658	-11.069	11.1409
47	2	236	-0.5634	3.6571	-7.731	6.6045
47	3	228	-0.6329	3.7853	-8.052	6.7863
53	1	50	-2.6208	3.7413	-9.954	4.7122
53	2	47	-1.7618	5.4680	-12.479	8.9554
53	3	44	-0.1514	2.8140	-5.667	5.3641
56	1	52	0.1950	4.5279	-8.680	9.0698
56	2	51	-1.1416	9.7821	-20.314	18.0313
56	3	46	-0.5528	2.7009	-5.847	4.7411

POLLUTANT =PB

METHOD	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
43	1	83	-0.6329	3.18218	-6.870	5.6042
43	2	84	-2.4728	5.02660	-12.325	7.3793
45	1	9	-2.4228	5.56731	-13.335	8.4891
45	2	9	1.2540	3.62342	-5.848	8.3559
57	2	10	-1.7729	1.28227	-4.286	0.7403
58	1	5	-8.3282	1.62973	-11.522	-5.1339
58	2	3	1.4798	2.97091	-4.343	7.3028
59	1	6	-3.7674	3.90481	-11.421	3.8860
59	2	6	-3.5171	3.50737	-10.392	3.3573
803	1	497	-0.2363	5.58532	-11.184	10.7109
803	2	463	-0.7909	3.57752	-7.803	6.2211

POLLUTANT =PB_FLOW

METHOD	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
43	2	10	1.4771	0.97568	-0.4353	3.3894
57	2	1	-1.6393	.	.	.
58	2	3	3.5928	1.39440	0.8598	6.3258
803	2	41	5.5741	5.27916	-4.7730	15.9213

POLLUTANT =PM10

METHOD	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
64	2	9	4.84815	7.02088	-8.9128	18.6091
771	2	413	0.00564	4.76569	-9.3351	9.3464
773	2	11	0.90045	4.58458	-8.0853	9.8862
774	2	12	-0.59385	4.09796	-8.6258	7.4381

POLLUTANT =SO2

METHOD	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
9	1	778	-0.9157	5.82888	-12.340	10.5089
9	2	718	-0.9133	5.46934	-11.633	9.8066
9	3	699	-0.9098	5.02341	-10.756	8.9361
9	4	47	0.4610	3.75052	-6.890	7.8121
10	1	1	1.4286	.	.	.
10	2	1	0.0000	.	.	.
10	3	1	-2.2333	.	.	.
11	1	45	2.0360	5.49888	-8.742	12.8138
11	2	43	3.5443	3.76148	-3.828	10.9168
11	3	38	3.8822	4.21419	-4.378	12.1420
11	4	25	4.1211	5.27213	-6.212	14.4545
13	1	26	2.6505	4.39740	-5.968	11.2694
13	2	12	6.5499	9.01871	-11.127	24.2266
13	3	14	3.9761	4.32305	-4.497	12.4493
13	4	1	0.7973	.	.	.
29	1	40	0.2125	4.56096	-8.727	9.1519
29	2	32	2.2720	5.26641	-8.050	12.5942
29	3	38	1.9153	5.53908	-8.941	12.7719
29	4	11	7.8492	3.03987	1.891	13.8073
39	1	413	0.6313	5.43032	-10.012	11.2747
39	2	332	0.3504	4.40792	-8.289	8.9899
39	3	354	0.0162	4.22307	-8.261	8.2934
39	4	21	-3.0992	3.42353	-9.809	3.6109
46	1	14	-0.9379	7.82699	-16.279	14.4030
46	2	12	-0.4134	2.25019	-4.824	3.9969
46	3	12	-0.5329	2.03803	-4.527	3.4616
60	1	27	0.6236	6.21414	-11.556	12.8033
60	2	26	-0.8218	3.58525	-7.849	6.2053
60	3	25	-1.3627	4.43405	-10.053	7.3280
61	1	9	-2.6318	8.65265	-19.591	14.3274
61	2	7	-3.6838	9.14746	-21.613	14.2452

TABLE 2. NATIONAL SUMMARY BY METHOD FOR 1987 PARS ACCURACY DATA 4

---------- POLLUTANT =SO2 ----------

METHOD	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
61	3	7	-3.2841	8.71864	-20.373	13.8044

---------- POLLUTANT =TSP ----------

METHOD	LEVEL	N	WEIGHTED AVERAGE	POOLED STD.DEV.	LOWER 95% PROB.LIMIT	UPPER 95% PROB.LIMIT
802	2	3963	0.118268	3.3491	-6.446	6.6825